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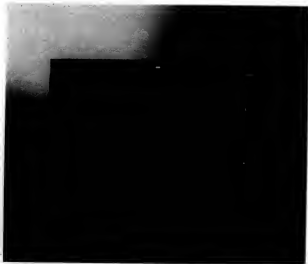
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Our Premier 100 conference featured a spirited debate over IT's relevance and much more.

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KNOWLEDGE CENTER PRIVACY

Compliance Headaches

Protecting consumer and employee privacy isn't easy. A patchwork of inconsistent and vague laws make it tough for IT to do the right thing, and the outsourcing trend means that more data is in the hands of outside parties. This special report will help you get up to speed on the challenges.

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38 Losing Control. Here are tips for controlling sensitive customer data when it's in the hands of a third-party outsourcer.

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Test Yourself: Do you know the rules of responsible information handling? Take this quiz to find out. [Q LinkLink a2300](#)

Book Excerpt: "Personalization plus privacy equals profit," say authors Anne

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Book Excerpt: In this excerpt from *Privacy For Business*, Stephen Cobb outlines five crucial issues for Web

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SPECIAL COVERAGE

100 PREMIER IT LEADERS 2004

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For full coverage, visit our Web site: QuickLink.a100

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Book Excerpt: "Personalization plus privacy equals profit," say authors Anna

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Book Excerpt: In this excerpt from *Privacy For Business*, Stephen Cobb outlines five crucial issues for Web

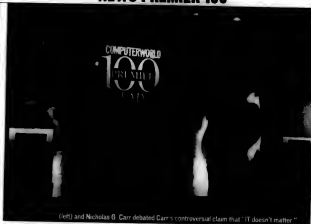
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Opinion: All bark and no bite? Columnist Mark Willoughby weighs in on the impact of California's SB 1386 identity protection bill. QuickLink.a5188



100
IT LEADERS 2004



(left) and Nicholas G. Carr debated Carr's controversial claim that "IT doesn't matter."

Speakers Clash in Spirited Debate Over IT Relevance

BY KATHLEEN MELNYKA
AND TODD R. WEIGS
PALM DESERT, CALIF.

Does information technology matter anymore? In a sharp debate that marked the end of Day 1 of Computerworld's Premier 100 IT Leaders Conference, author Nicholas G. Carr asserted that IT has

largely lost its ability to provide companies with a competitive advantage, and Bob Metcalfe, the inventor of Ethernet, rebutted Carr's views.

The users in attendance were so enthralled by the speakers' arguments that they continued to question them for a half-hour after the session was scheduled to end.

Carr, a former editor at Harvard Business Review, began by recounting his article "IT Doesn't Matter," which ran last year in that publication [QuickLink a3330]. In the article, he argued that IT applications and infrastructure, though essential to business and integral to business processes, have become so easily replicable that they no longer provide sustainable competitive advantage.

"When everyone is at parity, profit goes to customers, not to the bottom line," Carr said.

Like railroads, telephones and electricity, IT has become part of the general business infrastructure — absolutely necessary to compete but no longer strategic, he said. Companies still don't realize this, and as a result, they spend much more aggressively on IT than they should, Carr added.

Today, Carr said, risk management in IT is more important than innovation, and the biggest risk is overspending. "Companies should have a bias to spend less year over year for IT," he said. "Follow, don't lead. Even small delays can save you lots of money and risk."

But Metcalfe, the inventor of Ethernet and currently a principal at Polaris Venture Partners Inc. in Waltham, Mass., came out swinging.

"Carr has called you impatient, sloppy, wasteful, lavish spenders, counterproductive and lured into passivity by a chorus of hype," he said. "So many people have debunked Carr before me that I feel like Elizabeth Taylor's ninth husband: I know what to do, but how do I make it interesting?"

Metcalfe argued that IT matters to the tune of \$1.8 trillion in IT spending in 2003, according to figures from IDC in Framingham, Mass. And yet, he said, Carr concludes "that you people should stop spending wildly, stop being suckers, stop squandering corporate assets unless you want to end up on some Sarbanes-Oxley perp walk."

Metcalfe said Carr chose to cite only studies that support his thesis. "Studies have shown that studies show what they're intended to show," he said. "Be suspicious of studies."

The unsung heroes in the information chain are the IT leaders in the Premier 100 audience, Metcalfe said. "If Carr's advice is followed, how will new technologies find markets and be perfected? Who will provide testbeds?"

Finally, he said, Carr is not only wrong, but he's also dangerous because "he has succeeded in misleading the vast majority of Harvard Business Review readers, who read only the titles." Unless his views

Building a Plug-and-Play IT Staff

BY THOMAS HOFFMAN
PALM DESERT, CALIF.

IT executives at many companies are exploring ways to make their thinly stretched staffs more modular and responsive in order to quickly move people between business units and projects.

Developing an agile IT staff "is a significant challenge that we've spent a lot of time addressing," said Martin Colburn, chief technology officer at the National Association of Securities Dealers Inc. (NASD) in Rockville, Md. Colburn was one of several IT executives who discussed IT staffing at Computerworld's Premier 100 IT Leaders conference here last

week. When Colburn became CTO for the organization that regulates the Nasdaq Stock Market three years ago, his group was spending 75 to 80 cents on maintenance for every dollar spent on application development, he said. To lower those costs and free up IT staff, NASD last year began sending some application maintenance work off-site, starting with non-critical applications.

As a regulator of a securities market, said Colburn, NASD has to develop nearly all of its software applications in-house. "It's not like there's a lot of off-the-shelf software we can use to do this," he said. But because NASD



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NICHOLAS G. CARR

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The debate stirred a wide range of reactions from the audience.

Roger Zakharria, director of information systems for the restaurant technology support field service of hamburger chain Jack in the Box Inc. in San Diego, said he disagrees with Carr's conclusions but can understand his cautionary message about not jumping into new technologies too quickly.

"My concern was his logic," Zakharria said. "If [as an IT] industry, we do not take calculated risks and invest money into these [new] products, eventually, directly or indirectly, that's going to halt the innovation cycle, and that's going to have an even more detrimental negative impact on our business."

James Barry, vice president of development for payroll and human resources applications at Automatic Data Processing Inc. (ADP) in Roseland, N.J., said Carr made some valid points in his presentation but Metcalfe "made the same argument I would make."

To read a full transcript of the debate, visit our Web site.

QuickLink 45332

"If you only have a short time to have your sustainable advantage" over competitors, Barry said, "that means you have to be even faster with IT" rather than slowing your investments as suggested by Carr. Barry said ADP and its competitors make improvements in their products, and then they copy one another in a cycle of bringing improvements for customers. "It's very important [to keep up with one another], but it doesn't give us a sustained advantage," he said.

Some Agreement

Not everyone thought Carr's conclusions were completely off base.

Roger Reeg, senior vice president of systems development at MasterCard International Inc. in O'Fallon, Mo., said he agrees with Carr's position that IT has become more infrastructure-centered, rather than innovative. "We are managing a lot more infrastructure, as opposed to the revolutionary types of things that happened in the past," Reeg said. "I actually thought that both [Carr and Metcalfe]

had valid points. There are two sides to every story, and somewhere in the middle, there's the truth. That's very apt in this case."

Thomas Hupf, director of information systems for business safety and regulatory compliance vendor J.I. Keller & Associates Inc. in Neenah, Wis., said he thought that "Carr won the debate but lost the argument." The bottom line, he said, is that IT innovation is good, as long as a business can capitalize on it for a worthwhile period of time. "If you can either extend the window of opportunity or figure out how you're going to capitalize on it in the window you have, then it makes sense to do it," Hupf said.

Carr, though, incorrectly dismissed such a strategy, Hupf said. "There will be a lot of one-bit wonders. But if you can figure out how to take advantage of that window, do it — even if your window's a short one."

By always moving forward with IT innovations, even if competitors quickly adopt them, a company can show customers that it's on the leading edge of development, which can attract new customers, Hupf said. "A pattern of innovation" tells customers you're ahead of the curve and worth doing business with, he said. **Q 45408**

Speaking of Web services, well, it's probably best not to actually use that term with business-side executives, said

The phrase "Web services" and seems to make their eyes glaze over (and we all know it's pretty hard to explain). Better to just say what business problems you can solve with you know what and leave it at that

During the various Premier 100 conference sessions, attendees were asked their opinions on a wide range of IT issues. The results of one poll appear below. To access all the results, visit our Web site (viewing this page requires registration).

Are vendor lobbying groups such as ITAA having a positive or negative impact on cybersecurity progress?

65%

21%

14%

Helping to lead the fight in support of all users

Self-serving, politically motivated

Pay no attention to these groups

is able to farm out a fair amount of its application management, it has been able to lower its software support costs "to about 25 cents on the dollar," he said.

Bruce Philpott, assistant vice president of database administration at Raymond James Financial Inc., a financial services firm in St. Petersburg, Fla., said he believes the ability for IT organizations to be more responsive to business-unit demands "is centered more around having mature processes."

Philpott maintained that if an IT organization has mature business processes and an effective IT governance plan, "you can more easily react to changing business conditions," in part by tapping contract help as needed.

Another financial services firm, Al-

liance Capital Management LP in New York, has bolstered its application development staff from about 92 people to 100 over the past six months, said Richard K. Ronan, senior vice president of global investment management technology.

Convincing Business People But while Alliance Capital Management has sent some of its application maintenance offshore to reduce costs, Ronan said he's still undecided about how to sell business managers on the concept of sending some development work overseas. "If we add five offshore developers at the start of one U.S. developer, business executives will want to know whether they're delivering one-to-one productivity with our developers here and how the economics of this

would play out," said Ronan.

Programmers at his company are nearly all cross-trained on development skills such as Java, C++ and C#, Ronan said. "So that we can more easily move them from project to project, depending on where they fit best."

Companies that have been growing their IT staffs, as Raymond James and Alliance Capital Management have done, remain exceptions. Most companies with pared-down IT departments continue to struggle to deliver daily tech support and support technicians to a backlog of IT projects that piled up when the economy went soft.

J.R. Simplot Co. had to reduce the size of its global IT staff by about 10% to around 340 people 18 months ago, said Roger Parke, vice president and CIO at the food and agribusiness con-

If we add five offshore developers at the cost of one U.S. developer, business executives will want to know whether they're delivering one-to-one productivity with our developers here.

RICHARD K. RONAN, SENIOR VICE PRESIDENT OF GLOBAL INVESTMENT MANAGEMENT TECHNOLOGY, ALLIANCE CAPITAL MANAGEMENT LP

glomerate in Boise, Idaho.

But Parke began changing the company's IT governance model to a more decentralized approach when he came aboard four years ago, and as a result "we've been able to put more IT people to work directly in the business units to better support their needs," he said.

Under the decentralized model, IT workers are distributed throughout J.R. Simplot's business divisions, but the IT department itself still controls technology spending.

Parke said that he believes the approach has enabled his staff to deliver IT projects that are better aligned with business specifications. That has helped the company reduce its IT spending by about 25% over the past four years, Parke said. **Q 45416**

100 PREMIER IT LEADERS



BOB METCALFE (left) and Nicholas G. Carr debated Carr's controversial claim that "IT doesn't matter."

Speakers Clash in Spirited Debate Over IT Relevance

BY KATHLEEN MEYERHIA
AND TODD R. WEISS
PHOTOGRAPH BY JEFFREY M. HARRIS

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SPARRING WITH CARR

To read a full transcript of the debate, visit our Web site:

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www.computerworld.com

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POLL RESULTS

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CONFERENCE BLOG

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This is an excerpt from Computerworld's featured author Ellen Bette's conference blog. To read the full blog, go to our Web site: **QuickLink 45332**

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would play out," said Ronan.

Programmers at his company are nearly all cross-trained on development shells such as Java, C++ and COBOL, Ronan said, "so that we can more easily move them from project to project, depending on where they fit best."

Companies that have been growing their IT staffs, as Raymond James and Alliance Capital Management have done, remain exceptions. Most companies with pared-down IT departments continue to struggle to deliver daily tech support and application technicians to a backlog of IT projects that piled up when the economy went soft.

J.R. Simplot Co. had to reduce the size of its global IT staff by about 10% to around 340 people 18 months ago, said Roger Parks, vice president and CIO at the food and agribusiness com-

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RICHARD K. RONAN, SENIOR VICE PRESIDENT OF GLOBAL INVESTMENT MANAGEMENT TECHNOLOGY ALLIANCE CAPITAL MANAGEMENT LP

glomerate in Boise, Idaho.

But Parks began changing the company's IT governance model to a more decentralized approach when he came aboard four years ago, and as a result "we've been able to put more IT people to work directly in the business units to better support their needs," he said.

Under the decentralized model, IT resources are distributed throughout J.R. Simplot's business divisions, but the IT department itself still controls technology spending.

Parks said that he believes the approach has enabled his staff to deliver IT projects that are better aligned with business specifications. That has helped the company reduce its IT spending by about 25% over the past four years, Parks said.

■ 45418

Panelists Offer Tips on Improving IT Security

BY GARY H. ANTHES

A panel of IT managers told attendees at Computerworld's Premier 100 IT Leaders Conference here last week that the federal government has had

some positive impact on corporate security, mostly via regulation and legislation such as the Health Insurance Portability and Accountability Act of 1996.

"I will tell you that your health data is significantly more secure today than it was yesterday," said Linda Remo, who is the CIO at Universal Health Services Inc. in King of Prussia, Pa.

Remo added that government agencies such as the U.S. Food and Drug Administration have helped her strong-arm reluctant vendors into making their products more secure.

New, wide-ranging government regulations helped push The Guardian Life Insurance Company of America to establish a "holistic approach" to risk management, said Mark S. Sokol, Guardian Life's chief security officer. The New York-based company created the position of computer security officer, which has responsibility for IT security, but also oversees physical security, disaster

recovery and other risk management functions, he said.

Panelists said it's sometimes hard for IT managers to strike a balance between customer service and security. "You want to be an enabler; you don't want to always say no," said Al Brenowitz, chief information security officer and CEO for the County of Los Angeles.

They agreed that employee education — while "not sexy" as one panelist put it — is really the linchpin for security. William Karrow, CIO at the Chicago Board of Trade, said a woman cleaning a conference room there became suspicious of a laptop left running overnight. She reported it to security, and it was later discovered that someone had left the laptop running port-scanning software aimed at the corporate network.

Asked how the Board of Trade had gotten even low-level employees to take security incidents internally, not necessarily naming the employee who made a mistake, but doing it in a way that others learn from the error, Karrow answered, "We scare people."

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Senior managers have to be educated, too, but you have to communicate with them on ways they can relate to, Sokol



The panel discussed ways to respond to IT security demands.

said. "We don't talk about port scans or buffer overflows," he said. "We talk about information disclosure."

Remo offered this advice on employee education: "Make it a part of daily conversation in every project meeting. We make it clear that it's very project has responsibility for security. You have to make it part of day-to-day operations."

She also said it's important to publicize employee-caused security incidents internally, not necessarily naming the employee who made a mistake, but doing it in a way that others learn from the error.

Panelists singled out wireless and mobile computing as sources of special concern but said limiting their use isn't a

solution. Modern medicine demands that hospital workers carry wireless devices, Remo said, but wireless networks must be protected by security and intrusion-detection software.

Bob Clyde, chief technology officer at Symantec Corp., said strong encryption for wireless is necessary but not sufficient. "It's not enough for worms and viruses; worms can crawl right through," he said.

Several panelists said they equip employees' home and mobile PCs with the same security software, such as anti-virus software, that's used in the office. "We mandate the antivirus product you use," Remo said. "We can't live with your decision." ■ 45422



In the opening keynote speech, American Express Co. CIO Gene Sarlow offered a framework to answer the question "Do our technology investments generate adequate value?"

To read more, visit our Web site:
 Q: QuickLink 45306

Consolidation Remains High on IT Pros' Agendas

BY PATRICK THIBODEAU
 PALM DESERT, CALIF.

The drive to consolidate servers and data centers began in earnest after the dot-com bust as a remedy for the excesses of rapid IT growth in many enterprises. And consolidation remains a top IT issue for a lot of reasons, even if some of the cost savings aren't exactly what vendors promise.

Vendors "get all excited about how you can get all the benefit from server reduction," said Gary Shanker, director of information systems enterprise infrastructure services at Arizona Public Services Corp. Shanker cited claims that as many as eight servers could be easily reduced to one, but he said the best he has been able to do is con-

solidate four servers to one at the Phoenix-based utility. Limits on the ability of a server to support multiple applications without conflicts have restricted further consolidation.

Shanker said. Many of the IT managers interviewed at Computerworld's Premier 100 IT Leaders Conference here last week said they're involved in enterprise server or data center consolidation projects. And while their views vary about a consolidation's potential for savings, they said there are many reasons for undertaking one.

Compliance with the Sarbanes-Oxley Act wasn't a consideration when Michael Geynor, senior vice president and CIO at Federal Mogul Corp., began his consolidation effort 18 months ago. But improving the ability to audit

IT in order to meet compliance requests has since emerged as a key reason behind his effort.

The Southfield, Mich.-based supplier of automotive components consolidated nine data centers into one last year and plans to take out nine more this year. The goal is to reduce the number of data centers to two: one in the U.S. and one in Europe.

Geynor said consolidation is also an essential step when considering outsourcing. Federal Mogul runs its IT systems in-house, but Geynor said he's looking at strategic sourcing of his IT infrastructure — something he can't do until he cuts his own costs.

"What you need to do as a business manager is first clean up your own house," said Geynor, adding that if he does reduce his costs, an outsourcing will take those savings. Once a company saves money through consolidation, "if you can get another 25% or 30% out of an outsourcing, it might make it worth the effort," he said.

Ken Hair, IT director at the Detroit Medical Center (DMC), has been consolidating servers for five years to ease support and maintenance and to cut costs. The consolidations often come in response to new questions by the 12,000-employee health care organization, which operates 10 hospitals, two nursing com-

ters and other facilities in Michigan.

Application conflicts sometimes arise, and Hair is dealing with a unique application, he may leave it on its own server. But many DMC hospitals share applications, so much of Hair's work is focused on physical consolidation, such as using blades and racks and sharing a common network infrastructure and management capability.

Server consolidation isn't the answer for everyone. Mark Naylor, CIO at Humble College, a Toronto-based institution with more than 45,000 full- and part-time students, said server consolidations require costly testing to ensure that applications don't conflict. Centralizing also increases the possibility that a security breach on one server could lead to a larger problem.

"These costs are more important to me than the cost of a server," said Naylor. "My people resources are very limited, so it's easier for me to go buy another server." ■ 45421



The closing speech was delivered to a very engaged audience by author Mike Thibodeau.

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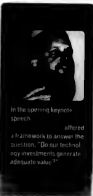
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Server consolidation isn't the answer for everyone. Mark Hughes, CIO of Hunter College, a Toronto-based institution with more than 45,000 full- and part-time students, said server consolidations require careful testing to ensure that applications don't conflict. Consolidating also increases the possibility that a security breach on one server could lead to a larger problem.

"People think we are very important to me than the cost of a server," said Hughes. "My people measure me very highly, so it's easier for me to go buy another server." ☐ 45423

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Sears, CSC Start Outsourcing Talks

Sears, Roebuck and Co. said it will negotiate an IT outsourcing deal that is expected to be worth about \$2 billion over the next 10 years with Computer Sciences Corp. If the companies agree on a contract, CSC would take over management of the retailer's systems, networks and decision-support technology. Sears CIO Gary Kelly told *Computerworld* in January that he planned to outsource much of the company's IT infrastructure. (QuickLink 44112).

Oracle Must Share Discount Data

A federal judge ordered Oracle Corp. to give the U.S. Department of Justice information about the discounts it has offered to software buyers. The judge agreed with the DOJ that the information could be material to the lawsuit the agency filed in an attempt to block Oracle's hostile takeover bid for PeopleSoft Inc.

IT Savings at DHS Unclear, GAO Says

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Short Takes

IBM **PLANS TO BUY THIN CLIENTS** said it plans to buy Thin Client Inc., a Dallas-based developer of software that manages end-user access privileges across multiple systems. . . . **COMPUTER ASSOCIATES INTERNATIONAL INC.** has bought THINMAIL software Inc., a Santa Barbara, Calif.-based vendor of desktop migration tools.

ATG Gives End Users Less Info ...

... in order to get them the right answers to their queries on e-commerce Web sites. Or that's the theory. Cliff Conneighon, senior vice president of marketing at Art Technology Group Inc. in Cambridge, Mass., argues that sites using traditional search tools overburden people with too many possibilities. "They often get too much information to make a decision," he says. ATG's answer? "We'll give them as few answers as possible, maybe just one," he proclaims. "Hopefully, the only one." The one, true answer machine will arrive at the end of March

in the form of ATG's Adaptive Customer Assistance (ACA) module to the ATG Commerce Package. What makes Conneighon so cocksure that the \$200,000 ACA module will work is that it ties a site's content to user profiles in its knowledge base. "We're not just indexing random data on the site," he says. Also at month's end, ATG will ship its Campaign Optimizer module, which uses a GUI-based so-called *even marketing managers* can use it. It lets

users define, create and conduct their own product-comparison tests. Do blue sweaters on models sell better than yellow ones on hangers? Who cares? Certainly not you any longer, because with the new tool, marketers won't be asking you to create those time-consuming comparison programs. At \$50,000, it's probably a cheap price to keep those marketing types out of your part of

the building. **Silicon Valley has its garages.** Oregon has its barns. That's where Musician's Friend Inc. started its mail-order music-equipment business in Medford, tucked in the southwest part of the state. The 20-year-old company is now part of Westlake, Calif.-based Guitar Center Inc., a \$1.2 billion distributor of musical gear. And it's moved from stacking guitar cases on hay bales to putting them in a cavernous 250,000-square-foot distribution center in Kansas City, Mo.

And it runs a major e-commerce site along with a 300-person call center in Salt Lake City. The catalog and Web business are split equally. The IT operations, still based in Medford, have been touted as the reason the company did so well financially in 2003, growing its profits by 46%. In its most recent earnings release, the company said, "Solid supply chain execution enabled us to capitalize on high

traffic at our Guitar Center stores and as a result of our improved infrastructure and systems at Musician's Friend, we were poised to take advantage of increased Internet demand." While giving the lion's share of the credit to his team and management for their work and support, DJ Buell, director of IT at Musician's Friend, also has kudos for Verastream, a well-established integration tool from WRQ Inc. in Seattle. Buell puts it at the center of both the company's "marry-up" inventory application and its ability to link Web operations so easily to its HP 3000 legacy system, referred to in the press release. He's particularly jazzed about Verastream's object-oriented design. Code written for its pilot project years ago is still useful today, he says. Verastream will also be crucial during the inevitable massive applications migration effort when the HP 3000 gets reluctantly **not out to pasture** sometime in late 2005.

So Buell will be pleased when later this month WRQ ships Verastream 5.5. According to Shaun Wolfe, WRQ's president and chief operating officer, in addition to freshening up the GUI, the upgrade will "smooth out the differences between Java and .Net." Wolfe says, "It may be in a company's best interest to stick to either Java or .Net, they always end up with a hybrid environment." Some applications can never run too fast. That's the logic behind the product strategy at NetScaler Inc. in Santa Clara, Calif. It ships appliances that boost the performance of software by masaging TCP/IP connections more efficiently and applying compression of higher-level protocols such as HTTP traffic. By fall, the company says it will ship an appliance that will be able to apply advanced compression/decompression techniques on TCP traffic, which can be particularly useful for Java-dependent applications used inside a VPN. **C 45413**

Smarter Printers

This fall, Kyocera Mita America Inc. in Fairfield, N.J., will ship the first of its multifunction printers equipped with soft ware from Netable Software Inc. (NSI) in Gaithersburg, Md. The software integrates documents processed by the printer into a variety of document management systems. NSI's one-year software contract with Kyocera Corp. expired this year.

IBM Bundles Storage Management Tools

BY LOGAN MERRIAN

IBM last week announced a storage software suite that it said in at least partially fulfill a utility computing plan to let storage devices be centrally managed and automatically allocated to application servers. The new suite, called Total Storage Productivity Center, supports the discovery, monitoring and provisioning of disk and tape arrays as well as storage networking equipment. IBM's rollout matches recent moves by EMC Corp.

and Veritas Software Corp.

Mike Fisch, an analyst at The Clippier Group Inc. in Wellesley, Mass., said IBM is moving closer to allowing storage capacity to be provisioned on demand. But like its competitors, IBM still lacks in-depth integration with hardware made by other vendors, he added.

"It's like a jigsaw puzzle, and they're throwing all these pieces out onto the table," Fisch said. "It's hard for us to put it all together and understand how it fits. But it

does fit somewhat, and they're nailing some good steps toward realizing this vision."

TotalStorage Productivity Center combines Tivoli SAN Manager and Tivoli Storage Resource Manager with a new device discovery tool called Tivoli Multiple Device Manager.

Jeff Barnett, manager of market strategy at IBM's software division, said the device management tool is designed around the Storage Networking Industry Association's

Storage Management Initiative Specification, a set of common models and application programming interfaces that will let storage management applications control disk and tape devices from different vendors.

The new suite works with Enterprise Storage Server disk arrays, known informally as Shark, plus IBM's midrange FASST arrays and SAN Volume Controller virtualization software. IBM said the new productivity on arrays made by Hitachi Data Systems Corp. and Hewlett-Packard Co. **C 45418**

AT DEADLINE

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MARK HALL • ON THE MARK

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2

4

5

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3. Senses increased Web traffic.
4. Responds to traffic automatically.
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BRIEFS

U.K. Agency Pulls Plug on EDS Deal

The U.K. National Health Service said it has pulled out of a 10-year, \$166 million contract that called for Electronic Data Systems Corp. to install a centrally managed e-mail system. The agency signed a similar deal with British Telecommunications PLC last year, one year after EDS was awarded its contract. EDS said it had been meeting its contractual obligations and will seek compensation for the termination of the deal.

Dell Adds VMware Tools to Servers

Dell Inc. said it will bundle server virtualization software developed by VMware Inc. with some configurations of its PowerEdge servers. The deal expands Dell's technology partnership with EMC Corp., which acquired VMware in January. Dell will also handle first-level technical support calls on the VMware tools, which are being offered on the servers along with EMC's Clariion disk arrays.

Microsoft Patches Three Security Flaws

As part of its monthly security updates, Microsoft Corp. issued patches for Outlook, MSN Messenger and the Windows Media Services software included with Windows 2000. The company initially didn't rate any of the security flaws as "critical," but it later upgraded the severity of the Outlook flaw to that level. Separately, Microsoft released a third service pack of security updates and bug fixes for Office XP.

Short Takes

Antivirus software vendors warned about a new variant of the SOBER e-mail worm that masquerades as a security patch from Microsoft. ... IBM is buying Tripe Technology Inc., a Brisbane, Calif.-based vendor of software for storing product-related information, for an undisclosed price.

Vendors Eye Cheaper Switching at Net Edges

Foundry, Extreme expand product lines for connecting PCs to core networks

BY MATT HAMLEN

FOUNDRY Networks Inc. and Extreme Networks Inc. today plan to separately announce edge-switching technology that promises users lower costs and improved functionality.

San Jose-based Foundry is introducing two FastIron Edge X-Series rack-mounted switches that offer 10 Gigabit Ethernet uplink capabilities to core networks at a price of \$320 per port. That's about half the cost of class-based switches. Foundry officials said.

Extreme in Santa Clara, Calif., is announcing that its Unified Access architecture and Power over Ethernet capability will be extended to its Alpine 3800 series switches, which can be used in small core networks or on network edges. Extreme has offered Unified Access since last April on its Summit 300 edge switches to provide wired and wireless access on a single device that also supports Power over Ethernet. That frees IT managers from needing to have separate infrastructures for wired and wireless LANs.

Keeping Up With PCs

Edge switching accounts for about 40% of all switch revenues, said Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va. He added that there's a constant need for innovation at the edges of networks to keep up with new technologies in desktop PCs and other end-user devices.

The Information Sciences Institute (ISI) at the University of Southern California this week plans to begin testing Foundry's new X424 and X448 switches inside 12 wiring closets, using the devices to connect 350 PCs to a data center in Marina del Rey, Calif. ISI is

running 10 Gigabit Ethernet between the wiring closets and the data center, said Richard Nelson, the institute's director of computing.

"We're always looking for innovation," Nelson said, pointing to the need to provide high bandwidth to computers that are linked for research into grid computing and the idea of interfac-

computer chips with biological issues.

The San Francisco Museum of Modern Art has connected 20 wireless access points to Extreme's Summit 300 switches, partly to take advantage of their Power over Ethernet capability, said IT director Leo Ballate. He added that the Unified Access architecture also provides security and administration features on the switches and not in the access points, which



Cisco Continues Security Push

BY JANAMUR VILAYAN

Who better to deliver network security than the vendor of most of your networking equipment?

That appears to be the thinking behind Cisco Systems Inc.'s strategy, as the company last week released another round of products aimed at helping companies detect and respond to network intrusions more efficiently.

The products include a new IP source tracking technology for locating network entry points for denial-of-service (DoS) attacks, transparent firewall support that allows users to segment networks into security zones and management software for Cisco routers.

Together, the new capabilities build on Cisco's Self-Defending Network Strategy, said Steve Collin, a director at the company. Under the initiative, Cisco is trying to build technologies that can automatically detect and respond to network threats better than stand-alone security products can.

The IP source tracking function, for instance, will make it easier to detect a DoS

attack and shut down malicious traffic. Similarly, the network segmentation that's enabled by the transparent firewall support gives companies a way to create "trust zones" within a network, Collin said. Integrating security at the network level is crucial, said Jon Duren, chief technology officer at AdAire Technologies Inc., a Knoxville, Tenn.-based provider of electrification services at truck stops. Stand-alone security products such as firewalls, intrusion-

New Products

are more vulnerable to hacking. Because Unified Access will now be available on the Alpine product line, Ballate said he would consider moving to those switches as the museum grows, but not for a couple of years.

Max Fissi, an analyst at Framingham, Mass.-based IDC, said sales of 10 Gigabit Ethernet ports saw a "huge uptick" in last year's fourth quarter. Shipments totaled about 5,000 ports, four times the third-quarter level, according to Fissi.

But he added that the technology remains "a drop in the bucket in terms of the larger switch market" and questioned how many companies need 10Gbps/sec. throughput now. "I'm skeptical as to the extent this will be used, but it's future-proofing your network," he said. **■ 45423**

detection systems and antivirus software by themselves aren't enough to deal with the increasing sophistication of network attacks, Duren said. As a result, there's a growing need to find a way to more effectively tie such devices together and share the information that's being gathered, he said.

Cisco, as the pre-eminent supplier of enterprise network equipment, is in a good position to do that, said Jeff Wilson, director of Infonetics Research Inc. in San Jose.

"Cisco really is the only vendor that can take this position, because they not only offer the security products but the network equipment as well," he said.

But there are caveats. Since Cisco is trying to be a one-stop shop, its technologies may not always measure up to products from more specialized vendors. "A lot of companies that sell stand-alone products would take issue with the quality of the individual [security] components that Cisco has," Wilson said.

Also, over the long term, Cisco is going to have to address issues such as Web services and application-level security, he added. **■ 45415**

Some Wireless IP Phone Users Shun Cisco WLAN Gear

Change vendors despite Cisco's 'fast roaming'

BY BOBBY BROWN

Despite Cisco Systems Inc.'s rollout last June of so-called fast roaming capabilities for wireless LANs, some IT managers said they have switched to WLAN equipment from other vendors because of concerns about quality of service on wireless phone calls.

Cisco's WLAN architecture is built around smart access points, which contain much of the intelligence that controls handoffs as users roam from one location to another. That requires wireless devices to reauthenticate and obtain new IP addresses from back-end servers as they're moved—a process that can disrupt voice communications, according to users and analysts.

For example, Pacific Sunwear of California Inc. had problems supporting wireless voice-over-IP calls on a Cisco 802.11b WLAN that was installed to support voice and data traffic at its new headquarters in Anaheim, Calif., said Ron Ehlers, the clothing retailer's vice president of information services.

Pacific Sunwear equipped 30 employees with wireless VoIP phones from SpectraLink Corp. after it opened the building last year. But Ehlers said that he soon began receiving complaints about dropped calls when users roamed from rooms to rooms, especially in areas where there was heavy data traffic.

Roaming Improves

Late last year, Ehlers called in Mern Networks Inc., a Sunnyvale, Calif.-based start-up that sells a central WLAN controller. He said the voice roaming problems went away immediately after Mern installed its equipment. Ehlers replaced all 16 of his Cisco access points with Mern's controller and access point technology early this year.

WLAN Strategies

Cisco: Uses distributed installations of access points to control WLANs, although it has added support for setting up master devices.

Proxim Corp., Symbol Technologies Inc. and other vendors: Offer centralized switches and controllers to offload authentication of wireless devices as end users move from place to place.

Sirf Technology Inc., a San Jose-based maker of chip sets for Global Positioning System devices, experienced similar problems with SpectraLink and Cisco 7920 VoIP phones operating over Cisco's WLAN access points, said Ian Chronister, Sirf's MIS manager.

Chronister also replaced the Cisco infrastructure with a Mern WLAN, a switch announced in December. It was an unusual move for Sirf "because we could be a poster

child for Cisco," he said, noting that his networks are otherwise all-Cisco.

Ron Seide, WLAN product-line manager at Cisco, said the company recognizes that VoIP places more demands on its WLAN technology than data sessions, which can tolerate gaps of one or two seconds as a user moves from one access point to another in an office.

Last June, Cisco introduced what it calls fast, secure roaming features to its IOS inter-

networking software.

Fast roaming is supported within a single access point that acts as a master device for wireless domain services, allowing quick authentication as users roam, Seide said.

Cisco also detailed a longer-term WLAN upgrade strategy called Structured Wireless-Aware Network, which will eventually support central management of wireless devices from its line of wired switches and routers.

Seide said he wasn't familiar with the installations at Pacific Sunwear or Sirf. But he added that he thinks they could have resolved their VoIP problems by doing thorough site surveys to guide the placement of access points and by using Cisco's fast roaming software.

Brad Noblet, director of technical services at Dart-

mouth College in Hanover, N.H., said he recently voice call handoff problems on a campus WLAN by using the fast roaming functionality. But Noblet said he doesn't think Cisco's WLAN architecture can scale enough to support a planned expansion that will provide wireless IP phone service to all 4,000 Dartmouth students, plus most faculty and administrative staffers.

Dartmouth has tapped Aruba Wireless Networks Inc. to provide the college with its switch-based WLAN technology and about 1,000 access points, Noblet said. ☐ 45424

CAMPUS NETWORK

Black Nubler says centrally managed access points are the most affordable way to expand Dartmouth's WLAN.

☐ 45424
www.computerworld.com

SAP Streamlines Middleware Suite

BY MARC L. BONGIORNI

SAP AG this week plans to unveil a more unified version of its NetWeaver middleware that's designed to end some of the headaches for users, who now need to coordinate the applications and integration tools that make up the suite.

That it's moving to align the components of the NetWeaver suite, which includes the company's data warehouse software, an integration broker and other products (see box).

"Going forward, we'll update NetWeaver annually, with all the pieces being updated and synchronized together," said SAP America Inc. spokesman William Wobl. Eventually, users will be able to run the entire suite on a single server, something that isn't possible now, he said. The new version will also include support for radio frequency identification tags,

so users can develop RFID-enabled supply chain management processes. Wobl declined to comment on when the upgrade is due for release.

Some users who are running pieces of the middleware suite were enthused by SAP's plan to unify NetWeaver, which has assumed a central role in the software vendor's long-term strategy since it was announced early last year.

"The products were never built to be together at the same time," said Mike Perrotti, vice president of IT at Halliburton

structure services, runs SAP's R/3 ERP applications, plus its portal and data warehouse software. Perrotti, who is also a director of the independent Americas' SAP Users' Group (ASUG), said that Halliburton will look at the possibility of running the portal and data warehousing technology on the same server in the future. "Today, every component requires one or more boxes to be installed," he said.

Responding to Feedback

The upcoming improvements should help make it easier to add third-party applications to R/3, said Lori Schock, global business process manager at silicone products maker Dow Corning Corp. in Midland, Mich. Schock, another ASUG director, said SAP is making the changes partly in response to feedback from the group's members that "we can't afford to manage multiple releases that aren't synchronized."

SAP is trying to keep middleware vendors such as IBM and BEA Systems Inc. out of

its ERP installed base by throwing in NetWeaver when users license its mySAP Business Suite, said Gartner Inc. analyst Yvonne Genovese.

"The whole goal is to bring it on as a single platform at a single price," she said, noting one potential downside: SAP might focus more on making the suite interoperable than on adding new features. ☐ 45408

TECHNOLOGY DETAILS

NetWeaver

A master data management module that harmonizes information from different applications.

A composite applications framework with templates and tool kits for creating business workflows across systems.

SAP's Business Warehouse and Enterprise Portal applications.

Hooks for integrating with Microsoft .Net and J2EE technologies like IBM WebSphere.

SOFTWARE UPGRADE

SAP's suite of reporting tools is data integration with SAP's data warehouse software as well as products from IBM and Microsoft.

☐ 45445
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Co. in Houston. That means users have to worry about whether NetWeaver components will work with one another, he said. And if there's a glitch with the software, getting it resolved can be "very time-consuming and make the process of upgrades very complex," Perrotti added.

Halliburton, which offers energy, engineering and con-

U.K. Agency Pulls Plug on EDS Deal

The U.K. National Health Service said it has pulled out of a 10-year, \$166 million contract that called for Electronic Data Systems Corp. to install a centrally managed e-mail system. The agency signed a similar deal with British Telecom's communications PLC last year, one year after EDS was awarded its contractual obligations and will seek compensation for the termination of the deal.

Dell Adds VMware Tools To Servers

Dell Inc. said it will bundle server virtualization software developed by VMware Inc. with some configurations of its PowerEdge servers. The deal expands Dell's technology partnership with EMC Corp., which acquired VMware in January. Dell will also handle first-level technical support calls on the VMware tools, which are being offered on the servers along with EMC's Clariion disk arrays.

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As part of its monthly security updates, Microsoft Corp. issued patches for Outlook, MSN Messenger and the Windows Media Services software included with Windows 2000. The company initially didn't rate any of the security flaws as "critical," but it later upgraded the severity of the Outlook flaw to that level. Separately, Microsoft released a third service pack of security updates and bug fixes for Office XP.

Short Takes

Antivirus software vendors warned about a new variant of the e-mail worm that masquerades as a security patch from Microsoft. **IT** is being triaged by Technology Inc., a Brisbane, Calif.-based vendor of software for storing product-related information, for an undisclosed price.

Vendors Eye Cheaper Switching at Net Edges

Loudly, Extreme expand product lines for connecting PCs to core networks

BY WATT HAMILTON

For X Networks Inc. and Extreme Networks Inc., today's plan to separate its automotive edge switching technologies that promises even lower costs and improved functionality.

San Jose-based Extreme is introducing two new Edge i-Series rack-mounted switches that offer 10 Gbabit Ethernet uplink capabilities to core networks at a price of \$4,500 (1U). That's about half the cost of chassis-based switches, founders officials said.

Extreme is in the latter camp, as announcing that its limited access hubs and Power over Ethernet capability will be extended to its i-Series 300-series switches. It has already used in small core networks or on network edges. Extreme has offered Unified Access since last April on its Summit 300 edge switches to provide wired and wireless access to a single device that also supports Power over Ethernet. That lets it make up for needing to have separate infrastructure for wired and wireless LANs.

Keeping Up With PCs

Edge switching accounts for about 40% of all switch revenues, said Joel Gettemer, an analyst at Current Analysis Inc. in Sterling, Va. He added that there's a constant need for innovation at the edges of networks to keep up with new technologies in desktop PCs and other end-user devices.

The Information Sciences Institute HSI at the University of Southern California this week plans to begin testing i-Series's new X424 and X448 switches inside 12 wiring closets, using the devices to connect 150 PCs to a data center in Marina del Rey, Calif. ISI is

running 10 Gbabit Ethernet for its computing closets and the data center said Richard Nelson, the institute's director of computing.

We're always looking for more access, Nelson said, pointing to the need to provide high bandwidth to computers that are linked for research into grid computing and the task of interfacing



NELSON says ISI needs switches that deliver high bandwidth.

a computer chips with biological tissues.

The San Francisco-based Museum of Modern Art has connected 20 million access points to Extreme's Summit 300 switches, partly to take advantage of their Power over Ethernet capability, said IT director Leo Balline. The Unified Access architecture also provides security and administration features on the switches and not in the access points, which

are more vulnerable to hacking. Because Unified Access will now be available on the Alpine product line, Balline said he would consider moving to those switches as the museum grows. But not for a couple of years.

Max Hess, an analyst at Framingham, Mass.-based IDC, said sales of 10 Gbabit Ethernet ports saw a "huge uptick" in last year's fourth quarter. Shipments totalled about 5,000 ports, four times the third-quarter level, according to Hess.

But he added that the technology remains a "drop in the bucket" in terms of the larger switch market and questioned how many companies need 10 Gbps throughput now. "On a switch level, the extent this will be used, but it's future-proofing your network," he said. **C 45423**

Cisco Continues Security Push

BY JAIKIMBA VIJAYAN

Who better to deliver network security than the vendor of most of your networking equipment?

That appears to be the thinking behind Cisco Systems Inc.'s strategy, as the company last week released another round of products aimed at helping companies detect and respond to network intrusions more efficiently.

The products include a new IP source tracking technology for locating network entry points for denial-of-service (DoS) attacks; transparent firewall support that allows users to segment networks into security zones; and management software for Cisco routers.

Together, the new capabilities build on Cisco's Self-Defending Network strategy, said Steve Collins, a director at the company. Under the initiative, Cisco is trying to build technologies that can automatically detect and respond to network threats better than stand-alone security products can.

The IP source tracking, for instance, will make it easier to detect a DoS

attack and shut down malicious traffic. Similarly, the network segmentation that's enabled by the transparent firewall support gives companies a way to create "trust zones" within a network, Collins said.

Integrating security at the network level is crucial, said Jon Durn, chief technology officer at iDelta Technologies Inc., a Knoxville, Tenn.-based provider of electrical services at truck stops. Stand-alone security products such as firewalls, intrusion-

detection systems and anti-virus software, by themselves aren't enough to deal with the increasingly sophisticated network attacks, Durn said. As a result, there's a growing need to find a way to more effectively tie such devices together and share the information that's being gathered, he said.

Cisco, as the preeminent supplier of enterprise network equipment, is in a good position to do that, said Jeff Wilson, director of Information Research Inc. in San Jose.

"Cisco really is the only vendor that can take this position, because they not only offer the security products but the network equipment as well," he said.

But there are caveats. Since Cisco is trying to be a one-stop shop, its technologies may not always measure up to products from more specialized vendors. "A lot of companies that sell stand-alone products would take issue with the quality of the individual [security] components that Cisco has," Wilson said.

Also, over the long term, Cisco is going to have to address issues such as Web services and application-level security, he added. **C 45415**

New Products

Green 2301 Router (Cisco) Cisco's 2301M 45% throughput increase in wide-area network applications and 100% increase in throughput at 500 Kbps.

Green IP Source Tracker (Cisco) Cisco's new IP source tracking technology for locating network entry points for denial-of-service (DoS) attacks.

Green IDS Firewall (Cisco) Cisco's new IDS Firewall for network security.

Green Self-Defending Network (Cisco) Cisco's new Self-Defending Network strategy for network security.

Some Wireless IP Phone Users Shun Cisco WLAN Gear

Change vendors despite Cisco's "fast roaming"

BY BOB BIREWIN

Despite Cisco systems' long-reputed fast roaming capabilities, but wireless IPANs, some IT managers said they have switched to WLAN equipment from other vendors because of concerns about quality of service on wireless phone calls. Cisco's WLAN architecture is built around smart access points, which contain much of the intelligence that controls handoffs as users roam from one location to another. That requires wireless devices to reauthenticate and obtain new IP addresses from back-end servers as they're moved—a process that can disrupt voice communications, according to users and analysts.

For example, Pacific Sun, a user of California Inc., had problems supporting wireless voice-over IP calls on a Cisco 802.11b WLAN that was installed to support voice and data traffic at its new headquarters in Anaheim, Calif., said Ron Hilts, the clothing retailer's vice president of information services.

Pacific Sun's carrier equipped its employees with wireless VoIP phones from Spectralink Corp. after it opened the building last year. But Hilts said that he soon began receiving complaints about dropped calls when users roamed from room to room, especially in areas where there was heavy data traffic.

Roaming Improves

Last year, Hilts enrolled in Meru Networks Inc., a Sunnyvale, Calif.-based start-up that sells a central WLAN controller. He said the voice roaming problems went away immediately after Meru installed its equipment. Hilts replaced all of his Cisco access points with Meru's controller and access-point technology early this year.

WLAN Strategies

Uses distributed installations of access points to control WLANs, although it has added support for setting up master devices.

Offer centralized switches and controllers to offload authentication of wireless devices as end users move from place to place.

Surf Technology Inc., a San Jose-based maker of chipsets for Global Positioning System devices, experienced similar problems with Spectralink and Cisco 7020 VoIP phones operating over Cisco's WLAN access points, said Jon Christensen, Surf's MIS manager.

Christensen also replaced the Cisco infrastructure with a Meru WLAN switch announced in December. It was an unusual move for Surf, the cause we could be a poster

child for Cisco," he said, noting that his networks are otherwise all Cisco.

Ron Seide, WLAN product line manager at Cisco, said the company recognizes that VoIP places more demands on its WLAN technology than data sessions, which can tolerate gaps of one or two seconds as a user moves from one access point to another in a network. For instance, Cisco introduced what it calls fast secure roaming features to its IOS inter-

networking software. That software is designed to allow a single access point to serve multiple wireless domains, allowing quick switchovers as users roam. Seide said.

Cisco also detailed a longer-term WLAN upgrade strategy called Structured Wireless. An Arista Network, which will eventually support central management of wireless devices from its line of smart switches and routers.

Seide said he wasn't familiar with the installations at Pacific Sun's car shop. But he added that he thinks they could have resolved their VoIP problems by doing thorough surveys to guide the placement of access points and by using a Cisco-based roaming software. Brad Noland, director of facilities at services at Dart

mouth, said he had no problems with Cisco's WLAN gear. He said he had no problems with Cisco's WLAN gear. He said he had no problems with Cisco's WLAN gear.

That doesn't mean, however, that all users are satisfied. "We have a lot of problems with Cisco's WLAN gear," said a user of California Inc.

points. Not a surprise. **C 45424**

CAMPUS NETWORK

QuickLink 45451

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SAP Streamlines Middleware Suite

BY MARC SONGINI

SAP. As this week plans to unveil a more unified version of its NetWeaver middleware, that's designed to end some of the headaches for users who now need to configure the applications and integration tools that make up the suite.

SAP last week confirmed that it's moving to align the components of the NetWeaver suite, which includes the company's data warehouse software, an integration broker and other products (see box).

"Going forward, we'll update NetWeaver annually, with all the pieces being updated and synchronized together," said SAP America Inc. spokesman William Wolf. Eventually, users will be able to run the entire suite on a single server, something that isn't possible now, he said. The new version will also include support for radio-frequency identification tags,

so users can develop RFID-enabled supply chain management processes. Wolf declined to comment on when the upgrade is due for release.

Some users who are running pieces of the middleware suite were confused by SAP's plan to unify NetWeaver, which has assumed a central role in the software vendor's long-term strategy since it was announced early last year.

"The products were never built to be together at the same time," said Mike Perrone, vice president of

struction services, said SAP. R3 ERP applications, portal and data warehouse software. Perrone, who is also a director of the independent American SAP Users Group (ASUG), said that Halbitzner will look at the possibility of running the portal and data warehouse technology on the same server in the future. "Today, every component requires one or more boxes to be installed," he said.

Responding to Feedback

The upcoming improvements should help make it easier to add third-party applications to R3 and to help global business process external siloed products market. Dow Corning Corp. in Midland, Mich. School, another ASUG director, said SAP is making the changes partly in response to feedback from the group's members that "we can't afford to manage multiple releases that aren't well harmonized." SAP is trying to keep and allow vendors such as IBM and REA Systems Inc. out of

SOFTWARE UPGRADE

• SAP is updating NetWeaver to a new version, SAP NetWeaver 7.0. The upgrade will include updates to the SAP NetWeaver 7.0. The upgrade will include updates to the SAP NetWeaver 7.0.

QuickLink 45445
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NetWeaver

Components include

- A master data management module that harmonizes information from different applications
- A composite applications framework with templates and tool kits for creating business workflows across systems
- SAP's Business Warehouse and Enterprise Portal applications
- Hooks for integrating with Microsoft .Net and .NET technologies like IBM WebSphere

Microsoft

Your potential. Our passion.

NAME

Ms. 3,000 Customer
Web Servers Upgraded
in Three Hours

REUTERS 



Saint-Etienne

Microsoft Windows Server System – Manage Remote Infrastructure easier to manage. Here's how in the past, updating Reuters servers depended on customer site requests dispatched a Reuters technician to the customer site. But, installing Windows Server 2003 Reuters can manage everything remotely allowing them to invest their resources in new products and added services. It's software that helps you manage it all. Get the full Reuters story and a hands-on management tool at microsoft.com/wssystem

Microsoft Likely to Update Win Server '03, but Many Users Shrug

New edition may collect feature packs released since product's launch in April

BY CAROL BLIMA

MICROSOFT Corp. confirmed earlier this month that it will likely introduce an update to Windows Server 2003 that includes the add-on feature packs it has released since the product shipped last April.

But for some users of those features, it's not a big deal.

"We are getting what we need separately. So is that an attraction? Not necessarily," said Larry Godec, CIO at First American Title Insurance Co. in Santa Ana, Calif.

"It would be nice if they were there, because you wouldn't have to go looking for them," said Keith Gilbert, an enterprise data architect at Labor Ready Inc. in Tacoma, Wash. "But it's not a huge issue. The fact that they're out there and you can go get them, it's easy enough."

But Jeff Price, a senior director in Microsoft's Windows Server group, said many cus-

tomers have been looking to the company to make add-on features, such as SharePoint Services and the Group Policy Management Console, "easy to consume" and to have a "high level of integration."

Price noted that customers currently pick and choose which features they want to add to their servers from Microsoft's Web site, and he said that process "works pretty well." But Microsoft thinks it "can have even more customer success by having that delivered in a vehicle that's easier to consume and install and manage," Price added.

Although the feature packs are already designed to be integrated with Windows Server 2003, Microsoft would need to release an update to provide an administrator with an "integrated management and in-

stallation experience" across all of the add-on technologies, Price said.

Godec said better management of the overall pieces of functionality would be helpful. But he said his company would have to carefully evaluate what it gets today vs. what it would gain from the new release. "We wouldn't necessarily upgrade just for the sake of upgrading," he said.

Gilbert said the application testing needed to upgrade to a new version of an operating system can be costly and time-consuming. "I don't know many IT departments that take upgrades lightly," he said. "Everyone has to do due diligence. You can't just go around up-



Keith Gilbert, CIO at First American Title Insurance Co., says he won't upgrade just for the sake of upgrading.

grading because Microsoft has put out a new version."

Price said the proposed update to Windows Server 2003 won't simply be a repackaging of the product with existing add-on features. He said it also may include new technologies

that have yet to be released.

"We will consider the broad range of technologies that are ready at the time we do this update," Price said. "And based on customer feedback, we'll see what we can put in."

Wants Choice of Features

A database services manager at an international cosmetics manufacturer and retailer said he would welcome the chance to get specific new features prior to the next release of Windows, code-named Longhorn. He said he plans to use one of the feature packs that's currently available, Automated Deployment Services. "A new release inclusive of all these tools would be great, as long as they during the installation process. I can deselect those I don't want," said the manager, who asked not to be named.

But he said there can be a downside to having features available simply through check boxes. For example, the manager said he doesn't want Internet Information Server enabled on database servers, yet some administrators who are accustomed to having IIS

enabled go back and install it.

If the Windows Server update emerges, customers who purchased Microsoft's Software Assurance plan for the product will be able to get it as part of their maintenance contracts. They pay an annual fee of 25% of the server license cost for Software Assurance. Price said Microsoft hasn't decided if there will be a release for Windows Server customers who didn't buy Software Assurance.

Price added that he's not sure when the server update might become available, although it's expected before Longhorn.

After initially saying Longhorn would emerge in late 2005, Microsoft hasn't provided a definitive update on the expected ship date. Neil Churney, a director of product management for Windows, said Microsoft plans to release a beta version by the end of this year and will re-evaluate the ship date based on the beta feedback. **■ 45417**

WINDOWS XP RELOADED?

Speculation grows about a possible return release of Windows before Longhorn. **QuickLink 45428**

Feature-packed: For a summary of Windows Server 2003 feature packs, visit our Web site.

QuickLink 45420
www.computerworld.com

Continued on page 1

Diversity

"Small suppliers are some of our best and most creative partners in technology," added Linda Dillman, CIO at Rentonville Inc., Ark.-based Wal-Mart Stores Inc.

Since 1994, Wal-Mart has spent close to \$4 billion buying technology from small or minority-owned businesses, and it's now encouraging its major suppliers to do so as well.

Unlike larger technology suppliers, small companies are generally more flexible and willing to accommodate specific customer needs, Dillman said. They also can bring high-

ly specialized skills that larger vendors may not always possess, she said. For instance, Ateb Inc., a small pharmacy systems supplier in Raleigh, N.C., helped Wal-Mart build an interactive voice-response-based prescription-refill application after larger vendors said they were unable to do so. The 80-employee company also maintains Wal-Mart's in-store music and TV programming systems.

Less Overhead

Small companies are usually cheaper than a contracting standpoint because they don't have as much overhead as their larger counterparts, said Bruce Carver, vice president and CIO at PepsiCo Beverages

& Foods in Chicago.

And having minority suppliers is also "part of doing good business," especially for companies with diverse customer bases, he said. With a large portion of PepsiCo's growth coming in major urban areas and among the Hispanic population, "how and who we do business with" is becoming important, Carver said.

As a result, PepsiCo, which last year spent only about \$20 million with minority-owned IT suppliers, is taking new measures to increase representation of minorities in its IT supplier ranks, Carver said.

For instance, senior technology executives at Pepsi have been asked to spend at least 12% more on minority suppli-

ers this year than they did last year. And all senior executives are going to be evaluated on the basis of "how much business we are doing with minorities," he said.


Small companies tend to be more eager than larger vendors for new business and are therefore sometimes more involved in a project, said Lori Sadler, executive vice president at Unet.com LLC. The Deerfield, Ill.-based online education company, which has used both large and small suppliers in rolling out several enterprise applications, discovered that smaller suppliers display more staff continuity and "commitment to our success," Sadler said.

Even so, small companies


and suppliers owned by women or minorities still need to constantly fight the perception that they aren't equipped to handle difficult projects, said Robert Blackwell Jr.,

founder and president of Chicago-based application developer Electronic Knowledge Interchange Inc. As a result of that perception, small suppliers are often forced into subcontracting roles for larger technology companies, even though they might be the ones providing the specialized skills, Blackwell said.

Moreover, "minority companies rarely get more than one chance" at a project, he said, so "there's a certain amount of paranoia about screwing up." **■ 45416**



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MARYFRAN JOHNSON

IT Passion = IT Power

"PASSION CAN PRODUCE amazing results." That's Shelley McIntyre of The Guardian Life Insurance Company of America speaking last week at *Computerworld's* Premier 100 IT Leaders Conference in

Palm Desert, Calif. She was one of more than 700 IT and business executives attending the event. (See pages 6-8 and QuickLink a100 for the full conference coverage.)

Although McIntyre, a VP of business technology services at the New York-based insurer, was referring specifically to Guardian's award-winning project involving an online annuity system, her comment could just as easily sum up the impact of two powerful days of peer connection and conversation.

I don't use the word *powerful* lightly here. The collective will of IT leaders can — and should — directly influence technology products and the vendors that sell them.

The most striking endorsement of that idea came in a talk by Alan Pallier, executive director of research at the SANS Institute [Quick Link 4535]. After demonstrating how easily hackers can break into ostensibly secure corporate networks, Pallier urged IT leaders to use their collective power to force vendors to deliver safer software by requiring certain security settings. He noted how Oracle has already complied with such a demand by the U.S. Department of Energy.

Will Pallier's call to action have a result? It certainly should. At least 75% of the audience members — surveyed after his talk — declared their intent to start requiring minimum security settings in all future systems purchases, as well as in the external systems connecting to their networks.

In other audience survey questions at the conference (available in a registered part of our Web site at QuickLink 4515), we asked the assembled executives to identify their most press-

ing IT leadership issues and most critical projects. Topping the leadership issue list were implementing business process re-engineering, streamlining operations and planning the future of the IT infrastructure. Singled out as the most important IT projects were those involving business intelligence/data management, enterprise integration and Web services.

Collecting useful, actionable ideas about all of those topics and having the time to talk them over with peers are the greatest benefits of a conference like the Premier 100. We also staged the first-ever debate between Nicholas Carr, author of the infamous *Harvard Business Review* article "IT Doesn't Matter," and Bob Metcalfe, Ethernet inventor and now venture capitalist. That exchange stirred up its share of passions, as well (see Quick Link 4532 for a transcript of the debate).

Our theme this year was "Mapping the Future of IT," which may sound rather grandiose but is, in fact, what IT executives do whenever they get together to talk strategy and compare best practices. No matter what industry segment they call home, CIOs and senior IT managers have many core issues in common. Vendor issues. User issues. Budget issues. Even regulatory compliance issues.

You can see that commonality even within the diversity of the 12 projects we singled out of the Premier 100 to honor as the "Best in Class" winners (see the special supplement attached to this page). They include massive undertakings like J.P. Morgan's grid computing project, Northrop Grumman's integration of its multibillion-dollar acquisitions and the U.S. Air Force's far-flung server consolidation project. They also include an innovative Web services project at Lincoln Financial, an industry-leading centralized call accounting project at Wyndham International hotels and the creation of the state of Ohio's user-friendly, self-service tax-filing portal.

Yet for all their surface differences, each of the winning projects embodies what so many of our Premier 100 conference attendees have: That underlying passion that can and will produce amazing results. **C 45378**



PIMM FOX

Using IT to Tap Experts' Know-how

THE U.S. GOVERNMENT is using basic knowledge management techniques to offer timely and valuable advice about how to do business abroad.

At the Department of Commerce, a commercial service called the DOC Insider is adopting technology for knowledge capture and management from Bellevue, Wash.-based AskMe Corp. The service uses the technology to accelerate decision consulting it offers to U.S. companies seeking to engage in international trade.

The DOC Insider has been using Web-based technology to create a knowledge network connecting its 100 offices in the U.S., another 150 to 80 countries overseas and a group of approximately 1,200 U.S. trade specialists who have expertise in what it takes to succeed abroad.

These specialists can tell you what trade show to attend if you're interested in selling medical equipment in Germany or what papers to file if you're trying to expand your software business into Japan.

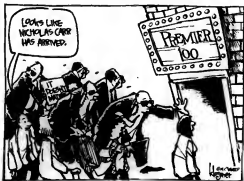
In the past, there was no way to organize what these experts knew, or even how to get in touch with them once they were identified.

Laura McCall, program manager for the DOC Insider, says using AskMe's system is part of the department's fulfillment of its mandate to help U.S. businesses compete abroad. "We have a dispersed, worldwide organization with pockets of information everywhere," she says. The DOC Insider's aim is to help U.S. companies do things such as perform international market research or locate overseas partners. "We want to sit down and make sure you've identified a good market and that you are export-ready," she says.

Each trade expert accesses the knowledge network via the Web and logs answers to questions. "That way,



Laura McCall is a program manager in Santa Barbara, Calif. Contact her at lmccall@docinsider.com.



we're able to identify the people and the resources to help clients solve problems," says McCall.

Before selecting AskMe, McCall reviewed the department's business processes to see where the gaps in information counseling existed. "We have a handful of trade specialists who know everything about export documentation, for example," says McCall. "But if they're located in Minnesota and you weren't in the local office, you'd never know they existed."

Now these experts can post answers according to different subject categories, upload documents or even direct businesses to specialized publications online. The information is reusable and is in an expanding database. About 1,200 people have used the system so far, saving about 750 hours of repetitive work, says McCall. There's also a reporting tool that managers can use to track the technology's return on investment and identify topics that are popular so they can beef up their expertise in those areas.

With the huge trade deficit that plagues the U.S., a knowledge management system that helps boost U.S. exports by making it easier to tap experts' know-how is a clear competitive advantage. Similar expertise lies hidden away inside most companies.

© 45227

ALEXANDER
KATSENELINBOIGEN

The Peculiar Nature of Software

MUCH DEBATE on offshoring IT jobs revolves around well-known arguments.

Proponents of offshore outsourcing, who are generally aware to protectionist measures, tend to focus on the traditional advantages of free trade, such as a more efficient allocation of labor resources and the benefits of competition for the consumer. Detractors spotlight the hidden costs of offshore outsourcing, concerns about security and the potential loss of skilled IT jobs in the U.S. Their remedies include proposing legislation designed to protect IT jobs and setting employment requirements for companies bidding on government projects.

Recently, an alarm has been sounded that high-end IT work such as the design of software and the development of innovative software is being claimed by companies overseas [Quick Link 45069]. If so, it must be remembered that software has some peculiar aspects, including tremendous job creation potential, no matter where it's developed.

Imagine that a programmer in India writes a program so useful that it creates thousands of jobs for developers in the U.S. to adopt, support and enhance its functionality.

New software products have had this effect many times; software is often not a final product, but instead a versatile tool that can be used in the production of a broad range of goods and services. And advances in software can also open up to automation areas that were previously off limits.

From this perspective, software de-



Programmer **ALEXANDER KATSENELINBOIGEN** in West Orange, N.J., is an aficionado of elegant code and software design patterns. You can contact him at askme@askme.com.

velopment work spans a spectrum that ranges from the production of final goods to innovative research and development.

The simple commodity development work at one end of the spectrum resembles the manufacturing of consumer goods, and offshore outsourcing may indeed lead to a partial loss of such jobs in the U.S. At the other end of the spectrum is innovative software development. The potential for such software to create jobs suggests that even if

some of this work is done overseas, there would still be benefits for U.S. programmers.

So it's difficult to assess the ultimate impact of offshore outsourcing on the software development market in the U.S. Whatever the tally, it's up to us to stay competitive by focusing on technology-intensive development that requires more advanced skills.

Fortunately, software isn't a market

with fixed demand. If enough shirts are manufactured in China, none need be made in the U.S., but the same isn't true of software. Not only is it a market that's still expanding, but its expansion also seems to fuel further expansion. In the foreseeable future, software development will have a multiplier effect. It won't reach a saturation point.

Of course, any technological innovation leads to a shift in the labor market, and there are losers and winners. Usually, winners aren't in the same economic sector as the losers. But given the peculiar nature of software, the ever-broadening number of areas in which it's applied and the fact that the demand for new software is still largely concentrated in the U.S., we're in good shape to gain a piece of the pie.

© 44937

ANOTHER POINT OF VIEW

Computerworld's Robert L. Mitchell has other thoughts about the impact of higher-level IT outsourcing. Read his column on page 25.

More columns and links to archives of previous columns are on our Web site: www.computerworld.com/columns

READERS' LETTERS

Testing the 'Talent'

I T TALENT FROM India and China has been characterized as dedicated, cheap and just as good as expensive domestic IT staff. My experience has been otherwise. Late in 2002, a group of contractors came to my company from India to work on a pilot project. It was all low profile until a virus we'd thought we'd eliminated resurfaced. It turned out that the contractors had brought the virus in with them. As the representative from desktop engineering, I spent the most time with the contractors as I headed the remediation efforts on their laptops. I was not impressed. The laptops they brought in didn't follow a standard configuration, deigned for any corporate system in the U.S. This could be excused as being typical of machines in the custody of developers, except that nearly all of the laptops had seriously out-of-date database software and definition files, and about half had no antivirus software installed at all. Needless to say, most of these machines were heavily infected with an assortment of viruses and worms.

Bill McQueen

San Francisco

Scrap Spyware

I'VE BEEN WAITING for one of the ambitious vendors to take the lead in blocking spyware and hostile scripting, but nothing has happened ["Think Outside the Gates," Quick Link 44636]. It amazes me that major corporations are letting a free-writer scribbler in Germany take the lead in spyware protection with his Sploit.

What's the problem? Spyware and hostile scripts are viruses and Trojan horses.

McAfee and Symantec, I'm writing for you to do your jobs.

Peter Finn

Sacramento,

percyfinn@abgglobal.net

Helpful Hackers

I COULD BE AMUSED that incidents like the code leak described in the story "Browser Hole Discovered After Code Leak" [Quick Link 44850] result in the expanded product becoming stronger. In that case, vendors might want to allow third parties, restrained by nondisclosure agreements, to review code to expose security holes and vulnerabilities.

Sure, hackers love to find holes, but their discoveries force vendors to patch these holes.

David J. Bernard
Programmer/analyst,
New Orleans

Managers' Morals

I MUST OBJECT to both Mark Half's characterization of the best project managers in his column "Thieves Among Us" [Quick Link 44234] and the insinuation that, to succeed, such individuals must be less than upstanding characters. I would have much preferred to read sentiments lauding the creative genius of the best project managers and their success as a result of the latitude afforded them by their ad-

ministrative heads.

In reading Half's commentary, the question arose as to why the project managers he described felt it necessary to follow clandestine tactics in order to achieve their objectives in an effective manner. Did their management not afford them the opportunity or resources necessary to pursue such endeavors under less shady circumstances?

While I agree that the best project managers "aren't" single-mind-

ed, the qualities that make them great are bound to their creativity in process and direction, not to a character that is questionable by all other measures.

To suggest that we recruit project managers based on their past efforts is to suggest compromising the most valuable qualities in an employee: honesty and integrity. There is absolutely nothing that would suggest that those qualities and creativity are mutually exclusive or that they are incommensurate in project managers today.

Galvin R. Work Jr.
Director, Rogers University
Computing Services,
Piscataway, N.J.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Janice Eckle, letters editor, Computerworld, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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MAYBE IT'S THE sound of all those tapping feet while users wait for their spreadsheets to open. Maybe management finally woke up to the cost of replacing those hard drives one by one at remote offices.

Whatever the reason, many companies are upgrading to a common "sweet spot" of 2.3- to 2.6-MHz Pentium 4 desktops and 1.6- to 1.7-MHz Pentium M notebooks, usually with 32MB of RAM and a 40GB to 60GB hard drive. That much is easy. The tougher questions are when to upgrade PCs rather than replace them and how to use this round of purchases to drive down long-term support costs while boosting business benefits. Here are some tips from those who have already struggled to find answers.

Simplify, Simplify, Simplify

"We had the 'Noah's ark syndrome' — we had two of everything," says Tim Link, CIO at Ohio State University Newark and Central Ohio Technical College. Over the past three years, he has replaced that unwieldy mix of 1,300 client PCs with one of three standard configurations from Dell Inc. PC support calls have already dropped 22%, and Link expects them to be down by 30% when final results are in.

Link has carefully planned how to minimize the number of configura-



Refreshing **THE** Desktop

If you're finally replacing old PCs, buy smart to maximize your performance and long-term savings.

By Robert L. Scheier

Refreshing THE Desktop

Continued from page 23

tions he must support as he replaces one-third of his systems each year. He's reluctant to go to a four-year life cycle for PCs because although that would reduce PC purchase costs, it would mean more individual models, which would complicate support issues.

Trying to open files from different versions of applications running on various versions of Windows is a huge headache for users and IT managers, and can be a prime driver for an upgrade. At the North Carolina Department of Health and Human Services in Raleigh, "it got to the point where a person sent an Excel spreadsheet to somebody else, and they couldn't open it" because they were running a different version of Excel, says CIO Don Allen. "That's when we decided we had to do something."

By July 1, the department hopes to have replaced 5,000 of its approximately 18,000 PCs with new systems from Hewlett-Packard Co. based on a single system "image" of the same processor, operating system and office productivity applications.

THE MAIN ALTERNATIVE

Blade servers - thin, rack-mounted units that use far less space and power than big, boxy servers - have taken over the data center. Hewlett-Packard Co. is betting that the next step will be a blade PC - a rack-mounted CPU dedicated to one user and linked to networked storage for easy data backup and recovery.

HP's Consolidated Client Infrastructure, introduced in December, "moves all the infrastructure into the data center, where it's more secure" and can be more easily maintained, says Keith LaFavre, vice president of business PCs for the American region at HP's Personal Systems Group. The company claims that this can cut lifetime PC maintenance costs in half.

Steve Acterman, director of corporate IT management at the Orange, Calif., office of Volt Information Sciences, likes the concept because of its similarities to the X terminal environment he once managed, where only the user interface ran on the client PC and most application logic ran on the server.

"There were some tremendous advantages in terms of more effectively utilizing your computing resources, as well as the maintenance and the support," he says. One possible stumbling block, though, is the cost of any upgrades Acterman needs for his X terminal to handle the video traffic.

Many customers are looking at more centralized or server-centric computing models because of the frequent security vulnerabilities found in desktops or notebooks running Windows, says Gartner Inc. analyst Mark Margevicius. As IT managers put more of a load on the server, he says, this will reduce the need for a more powerful client PC on the user's desk.

-Robert L. Schrier

Keep It Longer

"I've been in the industry more than a decade, and today's stuff is able to run a lot longer [than earlier PCs]," says Roger Widding, a senior technical engineer at CNF Inc., a global transportation and logistics company in Palo Alto, Calif. He's replacing some of his older 12,000 desktops and notebooks with new Dell systems and plans to keep them four to five years, "waterfalling" the most capable PCs to less-demanding users as they are replaced.

Given typical failure rates, most organizations can safely plan to keep a desktop PC four years, says Mark Margevicius, an analyst at Gartner Inc. in Stamford, Conn. If the system falls after the standard three-year warranty period, he suggests replacing it rather than spending time to fix it.

For notebooks, which face rougher handling by users, Margevicius suggests sticking to the traditional three-year replacement cycle.

The four-year cycle worked fine for John Monagony, vice president and chief technology officer of Embrocado Systems Corp., a provider of shipping terminal management services and cargo management systems in Alameda, Calif. By upgrading the memory from 128MB to 256MB, he has managed to upgrade many older systems to they can run Windows 2000.

Some users buy higher-end systems to stretch the machine's life span or reduce the need for future upgrades. For example, Link buys PCs with a 3-GHz processor and a full pipeline of memory. "I don't want to have to buy a memory upgrade, I don't want to buy a hard-drive upgrade. I'm looking to get these as hands-off as possible," he says.

While PC replacement cycles are stretching out, Margevicius suggests that adding memory is about the only work worth doing on an older machine. Dallas-based Wyndham International Inc. is replacing about 2,000 PCs and boosting the memory in another 1,000 from 128MB to 256MB or 512MB. But only systems with at least a 500-MHz Pentium III get upgraded rather than replaced, according to Mark Hedley, senior vice president and chief technology officer.

"If it's something as simple as replacing a mouse or a keyboard," it pays to fix the problem without worrying what's inside the box, says Steve Acterman, director of corporate IT management at the Orange, Calif., office of Volt Information Sciences Inc., a professional services firm. But Acterman plans to replace Volt systems older than Pentium III with 1,200 to 1,500 PCs from HP by June.

Don't Forget Service and Support

"Don't get hung up on the name brand," says Widding. "If you look inside the guts of a PC, they're becoming more and more a commodity item like a toaster." Instead, he says, focus on which contractors the vendor uses to support remote offices and the quality of the vendor's service.

For example, some vendors will automatically replace PCs and even automatically update software for a fixed price per seat. But Margevicius warns these services work best for companies with strict controls over what PCs users can buy. If not, he says, "you'll get nickel and dimed" with extra charges to

TYPICAL CONFIGURATIONS

DESKTOPS	PRICE
2.3- to 3-MHz Pentium 4 processor	
512MB RAM	\$800-\$1,500
40GB-60GB hard drive	

NOTEBOOKS	PRICE
1.6- to 1.7-MHz Pentium M processor	
512MB RAM	\$1,500-\$2,000
40GB hard drive	

Note: Configuration ranges for average knowledge workers, varying with office support functions.
SOURCE: COMPTON/STANLEY/WHITNEY

WHAT'S HOT? WHAT'S NOT?

WHAT'S HOT	WHY
USB key storage	Portable, high capacity, reliable
Optical media	High capacity, low cost
Flat panels	Thinner, less power consumption

WHAT'S NOT	WHY
3.5-in. floppies	Unreliable, low capacity, security risk
CRTs	Use more desk space and energy (but still cheaper than flat panels)

SOURCE: COMPTON/STANLEY/WHITNEY

support any nonstandard configurations.

Allen is relying on Affiliated Computer Services Inc. in Dallas to perform regular hardware and software updates across offices in all 100 North Carolina counties. IT managers should be sure a vendor has the processes and qualified subcontractors to handle such work over a wide area, he says.

Remember Education and Training

With the move toward fewer, more standard configurations, users need to learn that "they don't have some of the freedoms they had before," says Allen. Rather than buy new systems whenever they find the money or download software from the Internet, he says, users must accept getting hardware and software upgrades on a department-wide schedule.

Users also "have to allow us time to come in and replace their systems," says Allen. "They can't tell us 'We're too busy today; come back in two weeks.'" And rather than asking a neighbor for help, he says, they must call the help desk, which can then generate a trouble ticket "so we can track how long it takes to get problems resolved."

Widding also suggests that corporate IT discuss and agree on procedures with remote offices specifying when a PC should be replaced rather than upgraded. "Set your policies up ahead of time," he advises, "so you're not fighting [over replacements] bit by bit." **45099**

Schrier is a freelance writer in Boylston, Mass. He can be reached at rschrier@bcharter.net.

BRIEFS

Telelogic Upgrades UML-based Tools

Telelogic AB in Malmo, Sweden, announced last week that the new version of its DOORS/Analyst requirements management tool will be integrated with the upgraded editions of its TAU/Architect and TAU/Developer development tools, which are based on the Unified Modeling Language (UML) 2.0 specification. TAU/Developer 2.3, which already supported the C language, will add model-driven code generation for C++ and Java and provide integration with other platforms. The new versions are expected to be released on April 30.

Hitachi Launches Deskstar ATA Drive

Hitachi Global Storage Technologies Inc. in San Jose last week announced its highest-capacity 3.5-in. ATA hard drive, the 40GB8 Deskstar 7K400. The new drive has been designed for audio/video and Serial ATA near-line storage environments.

SAS Announces Service-Level App

Business intelligence software vendor SAS Institute Inc. has announced a tool to help companies view their IT organizations, run analysis on relevant data and ensure that corporate performance levels are being maintained. The IT Service Level Management application ships next month and will start at \$30,000.

Nexaweb Updates Dev Platform

Nexaweb Technologies Inc. in Cambridge, Mass., last week announced availability of Nexaweb Software Platform 3.0 for building and deploying rich-client Internet applications. New features include a visual development environment, server clustering and support for Web services. Server-based pricing starts at \$30,000.

How IT Has Outsourced Itself

ROBERT J. MITCHELL

AMERICANS HAVE an unwavering faith that technology can solve all of their problems, but they tend to forget that it also creates new ones in the process. The leading edge of technology innovation often cuts both ways. Perhaps the best example of this is the current election-year brouhaha over the accelerating trend of outsourcing U.S. jobs in general — and

IT jobs in particular. IT advances aren't the sole cause of the jobs exodus, but as many laid-off programmers and call center staffers have come to realize, IT innovations have accelerated that trend.

Some effects are subtle. For example, voice-over-IP telephony systems and the ability to route converged voice and data traffic through private global networks is cutting telephone system infrastructure and operating costs. Along the way, IT jobs are disappearing, and so are networking functions merge. The technology also makes it easier and less expensive to route help desk and customer support calls to distant call centers in places like India, where labor costs may be one-fifth of what companies typically pay U.S. workers.

Likewise, the rise of the PC years ago helped level the playing field for aspiring programmers everywhere by putting unprecedented computing power in the hands of people and institutions that could never have afforded access to a mainframe. And with the emergence of the Internet and collaborative tools, local development groups have evolved into virtual teams with a global reach. Team members can be quickly selected and assembled based on expertise and lowest labor cost.

The rapid pace of technical change has always discounted technical experience, making it easy for the new kid on the block to catch up. New hires, fresh



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from graduate school and steeped in the latest technologies, have often taken the exciting positions while veteran programmers were shunted into dead-end jobs maintaining legacy systems and products. Sorry, the new guy doesn't do Cobol. Today, the new kids aren't even on your block. The plum projects are moving overseas, where competent programmers can be hired for salaries of \$10,000 or less.

Meanwhile, the programming process itself is becoming more efficient and automated, reducing the number of programmers needed. Some companies have begun embracing techniques such as extreme programming, which advocates say improves both productivity and software quality. One company I recently spoke with claimed to have seen a 40% productivity gain on some projects, which greatly reduced programmer time.

Until now, many IT professionals have rationalized that only less desirable, low-level positions were under threat — jobs like the one I once had in a PC vendor's tech-support department. Management there used commercial spyware to monitor my computer and telephone activity, tracked bathroom breaks and put the pressure on to complete as many calls as possible by publicly posting daily statistics on each staff person's call volumes and average call times. Competition was intense because those at the bottom of the list were routinely fired. No one aspires to that kind of job.

But what's shocking to many IT workers is how quickly the better jobs further up the food chain are disappearing. Software engineering and hardware design jobs are following basic programming and call center positions out of the country. In some cases, entire research and development operations are moving to places like India, where companies such as Google have established a presence.

Taken together, these trends add up to tough times for many IT professionals. With as many as one in 10 IT jobs expected to go overseas this year, according to Gartner Inc., and other positions being eliminated, it's not surprising that the employment rate in the industry has jumped above the national average. Politicians can rail against the outsourcing epidemic, but protectionist efforts won't stem the tide. Given the compelling business advantages of globalization, this trend will only increase.

What's an IT professional to do? Technologists accustomed to jumping from one hot technology area to the next may soon find that this time, technology alone won't solve their employment problems. Instead, the safest jobs — and the most rewarding ones — will be those that require a deeper understanding of an employer's business and unique business processes, jobs where staffers work in IT silos — those that can be easily isolated and compartmentalized — are easy to outsource. Jobs that require acting on an understanding of corporate business processes and culture are not.

More than ever, good communication skills matter. The arrogant, antisocial techie who just wants to write code in his cube is an endangered species. Those who work well in collaborative groups are more likely to succeed, and those who can manage multicultural, virtual teams and have strong project management skills will fare even better. Gaining those new skills and positions won't be easy — it never is. But it's much better than the alternative. **Q 45206**

MORE ON OUTSOURCING

For another take on the trend of higher-level IT jobs moving offshore, see "The Peculiar Nature of Software" on page 21.

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MANAGEMENT

03.15.04

They have a variety of different titles but these analysts work with the IT and business groups to improve data quality and standardization.
By Mary Brandel

A CUSTOMER IS A CUSTOMER is a customer, right? Actually, it's not that simple. Just ask Emerson Process Management, an Emerson Electric Co. unit in Austin that supplies process automation products. Four years ago, the company attempted to build a data warehouse to store customer information from over 85 countries. The effort failed in large part because the structure of the warehouse couldn't accommodate the many variations on customers' names. For instance, different users in different parts of the world might identify Exxon as Exxon, Mobil, Esso or Exxon-Mobil, to name a few variations. The warehouse would see them as separate customers, and that would lead to inaccurate results when business users

performed queries.

That's when the company hired Nancy Rybeck as data administrator. Rybeck now leads a renewed data warehouse project that ensures not only the standardization of customer names but also the quality and accuracy of customer data, including postal addresses, shipping addresses and province codes.

To accomplish this, Emerson has done something unusual: It's building a department with six to 10 full-time "data stewards" dedicated to establishing and maintaining the quality of data entered into the operational systems that feed the data warehouse.

The practice of having formal data

DATA STEWARD

Basic understanding of data modeling
Basic understanding of DBMS
Strong understanding of data warehouse
Technical writing

stewards is uncommon. Most companies recognize the importance of data quality, but many treat it as a "find-and-fix" effort, to be conducted at the end of a project by someone in IT. Others casually assign the job to the business users who deal with the data head-on. Still others may throw resources at improving data only when a major problem occurs.

"It's usually a seesaw effect," says Chris Enger, formerly manager of information management at Philip Morris USA Inc. "When something goes wrong, they put someone in charge of data quality, and when things get better, they pull those resources away."

Creating a data quality team requires gathering people with an unusual mix of business, technology and diplomatic skills. It's even difficult to agree on a job title. In Rybeck's department, they're called "data analysts," but titles at other companies include "data quality control supervisor," "data coordinator" or "data quality manager."

"When you say you want a data analyst, they'll come back with a DBA [database administrator]. But it's not the same at all," Rybeck says. "It's not the data structure, it's the content."

At Emerson, data analysts in each business unit review data and correct errors before it's put into the operational systems. They also research customer relationships, locations and corporate hierarchies; train overseas workers to fix data in their native languages; and serve as the main contact with the data administrator and database architect for new requirements and bug fixes.

Continued on page 30

Data Stewards

SEEK CONFORMITY

ILLUSTRATION: JEFFREY M. HARRIS



MANAGEMENT

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Continued on page 40

Data Stewards



trailblazer

scout



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COMPUTERWORLD

4 **Lincoln Financial's** Web services system syndicates company-specific content and applications on its partners' Web sites.

6 **The U.S. Air Force** moves to commercial systems to help consolidate infrastructure and centralize management.

8 **Reliant Pharmaceuticals** deploys a voice-response sales force automation system instead of shelling out the cash for handbills for its users.

10 **Northrop Grumman** saves \$57 million a year by integrating the IT systems of acquisition Ligon Industries.

12 After a vendor update falls through, **Guaranty Life Insurance** forges ahead with its annuity-processing system.

13 **DHL's** project to consolidate its eight North American data centers into one facility saves \$24 million in a year.

14 **J.P. Morgan's** grid computing project will eventually combine the power of about 2,000 CPUs, saving millions of dollars annually.

16 **Calspine Corp.** generates millions of dollars in new revenue by creating a set of real-time interfaces to energy markets.

16 **Via U.S.A.'s** cardholder dispute-resolution system increases customer satisfaction while chopping millions in costs.

20 A call-accounting system at **Wyndham** hotels cuts phone costs by storing variable-rate tables on a central server.

22 **The Ohio Business Gateway** lets businesses conduct transactions online with four state agencies, slashing the state's costs by 42%.

22 **Netral Networks'** integrated CRM system saves the company \$15 million and reduces its abandoned-call rate by 5%.



Best 100 IN Class

These projects by Premier 100 IT Leaders resulted in more nimble organizations that met business imperatives, saved millions, improved customer service or boosted bottom-line revenue. Here's an inside look at their trials and triumphs.

Up with capacity. Down with complexity. HP StorageWorks Enterprise Virtual Array combines storage with the ability to pool resources, making it easy to control your information. Virtualization ensures capacity is dynamically expanded without disrupting service, giving information room to breathe, and business room to change.

Solutions for the adaptive enterprise.



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EDITOR'S NOTE

Simple Solutions

WITH SO MANY CHOICES available to us in our everyday lives, it's the simple solution that often goes unexplored. Not so with this year's Best in Class award winners, who took some roads less traveled. They stopped, stepped back, took in the entire breadth of their IT environments and then recast their existing systems. Their choices not only created more nimble IT organizations, but also addressed business imperatives in creative, efficient ways.

Take John M. Gilligan, whose makeover of the U.S. Air Force's IT systems included consolidating infrastructure, centralizing management and standardizing applications. The result: annual savings of about \$200 million. Or Steve J. Bandrowczak, whose project at DHL International to consolidate eight data centers into one state-of-the-art facility is saving the freight company about \$24 million a year.

Now in its third year, Computerworld's Premier 100 Best in Class awards honor such leaders. They are a select subset of the 2004 Premier 100 honorees who have created

striking business value through cutting-edge technology projects. To choose this



John M. Gilligan
Computerworld 100 Best in Class

year's 12 winners, a panel of outside judges and Computerworld editors reviewed the project candidates, looking in particular for signs of measurable payback, learning experiences, strategic importance to the business, substantive customer impact and new revenue opportunities or cost savings.

Many of these IT leaders applied the basic idea of simplification to some big projects. But with grandness of scale, of course, comes friction and risk. We hope that reading about

how these 12 award-winners overcame those challenges will put you on your own path to simplifying and enhancing your IT environment. **44670**

The Judges

Special thanks go to our panel of judges, *Computerworld* Premier 100 IT Leader award, who helped evaluate dozens of candidates. They are:



DENNIS S. CALLAHAN
Senior vice president and COO, Quantimet Life Insurance Company of America, New York (2003 honoree)



DANIEL W. BARROW
Senior vice president of IS and CIO, Morgan Stanley, New York (2003 honoree)



RON OLCHMANN
Senior vice president and COO, UPS Group Ltd., San Francisco (2003 honoree)



FREDERICK R. FORD
Director of Information Systems, Schreiber Group, Portland, Ore. (2003 honoree)



MICHAEL J. BANDROWCZAK
Vice president, technology strategy and architecture, Staples Inc., Framingham, Mass. (2002 honoree)



CURTIS DAVIS
Senior vice president and chief technology officer, Delta Technology Inc., Atlanta (2002 honoree)

Other judges evaluated only those candidates within their own industries.

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EDITOR'S NOTE

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U.S. Air Force
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COMPUTERWORLD.COM

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Senior vice president of IS and CIO, Mohegan Sun Casino, Uncasville, Conn. (2003 honoree)



RON MUCKMAN

Senior vice president and CIO, DFS Group Ltd., San Francisco (2003 honoree)



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Note: Judges evaluated only those candidates outside their own industries.

Web Services System

BY MARY BRANDEL

IT'S ONE THING to create a business mantra and quite another to live by it. What's even rarer is for that mantra to inspire the development of an IT system that improves a company's sales distribution and time to market, boosts partner relationships and customer satisfaction, reduces Web site costs and increases corporate recognition.

But that's what the IT team at Lincoln Financial Group in Philadelphia did in January 2003, when it went live with Service Broker, a Web services-based system that syndicates Lincoln-specific content and applications on its partners' Web sites.

It wasn't a project that had an easy solution. Lincoln is a \$4.6 billion provider of life insurance, retirement products and wealth management services. It distributes its offerings through financial advisers, banks and independent brokers.

When Jason Glazier, chief technology and e-commerce

officer at Lincoln, joined the company in 2001, the corporate mantra was, "We want to be the partner of choice," he says. "So I asked, What does that mean from an e-commerce perspective?"

One answer was tighter integration with broker Web sites. In most of the insurance industry, if consumers want to access their ac-

counts or download a form from a broker site, they click on a link that takes them to the insurance provider's site, where they input a separate password or user ID. Lincoln wanted to go a step further, providing content and account access within its partner Web sites, as well as single sign-on for consumers.

The first problem Glazier's group encountered was brand conflict — brokers wanted their sites to retain their own look and feel. Clearly, if Lincoln wanted to be a "partner of choice," it also had to hand over the branding reins.

The second problem was a technical one. Simply outlining the Lincoln content in an HTML frame wouldn't provide the partner's look and feel. A pure Web services approach was also out, since most of Lincoln's clients couldn't support that kind of system. "It is not a hassle-free implementation, since the partner must then process the XML/SOAP messages," Glazier says.

For a short time, Lincoln maintained subsites for its partners that wasted them, and those sites linked to requested content. However, maintenance of the subsites was burdensome.

The ultimate answer was Service Broker. It took three developers four months to build the pilot of Service Broker, which is a Web services-based application with a front end that Glazier calls a servlet. When the servlet is installed on a partner's server, it provides a wrapper that can accept Lincoln's content and applications and still maintain the partner's look and feel.

The servlet manages many of the functions the partner would have to manage in a





Web technology and e-commerce officer, Lincoln Financial Group

Web services application, such as authentication, digital signatures, passwords and page rendering. When the partner wants to include Lincoln content or an application, it needs to insert just one line of code, Glazier says.

Because the project represented such a new idea, one challenge was to develop a demo so customers could visualize the system's capabilities. This entailed keeping a close watch on how much money was initially invested.

"We knew they may not take us seriously because insurance companies are not usually known as innovative," Glazier says.

When customers did see it, says Rob Pal, Lincoln's vice president of e-business and production services, about 40% were interested in this type of full-scale syndication. Currently, Service Broker is fully implemented at five client sites. Implementation is in progress at three others, and five more

clients are reviewing the Service Broker agreement.

There was some resistance on the part of clients that didn't want an outside source controlling technology on their sites, according to Matthew Josefowicz, manager of the insurance group at Celent Research in New York. However, resistance was overcome by the application's power and ease of use.

According to Glazier, Service Broker was not only completed on time and un-

der budget, at a cost of \$545,000, but it has also exceeded business objectives.

For instance, since the deployment, Lincoln's growth rate with syndicated partners has increased manifold, according to Glazier. In three cases, clients have granted Lincoln premier "shelf space" on their Web sites. Time to market has also improved; it now takes days to syndicate customized content and applications, vs. the months it previously required.

Service Broker has also reduced Web subsite development costs, each of which averaged \$115,000 in annual expenses. And, according to Pal, it has improved partner relationships. "In one instance, we were new to a customer, and now we're one of their top carriers," he says. "There are a lot of factors involved, but syndication is one of them."

In addition, Glazier says, there has been a significant increase in the sale of Lincoln's products and services through the brokers using the technology. "There is no doubt in our management's mind that our syndicated technology relationship is partly responsible for this," he says.

According to Josefowicz, Lincoln is the only insurer that doesn't require consumers to leave a partner's Web site to access its information. "Lincoln's initiative makes it easier for partner distributors to do business with them, which Celent research has shown to be a critical factor in driving carrier choice among independent agents," he says. **■ 44445**

Brandel is a freelance writer in Grand Rapids, Mich. Contact her at brandel@comcast.net.

BEST IN CLASS

Lincoln Financial

SYNDICATES CONTENT WITH Web Services System

BY MARY BRANDEL

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■ **Business:** Lincoln Financial Group offers annuities, life insurance, mutual funds, managed accounts and other services. In 2002, its annual consolidated revenue was \$4.6 billion.

■ **Project champion:** Jason Glazier

■ **IT department:** 800

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Network Consolidation Effort

BY PATRICK THIBODEAU

CIO JOHN M. GILLIGAN is leading a makeover of the U.S. Air Force's IT systems that involves consolidating infrastructure, centralizing management, standardizing applications and building a foundation for Web services. It's a vast project, affecting some 500,000 personnel stationed across 100 military installations.

It's also a network-centric project, which will give the Air Force the means of "leveraging information across the spectrum of our war-fighting operations to give us significant combat advan-

tage," says Gilligan, who oversees the agency's multi-billion-dollar IT operations.

When this project began in 2001, the Air Force's IT landscape was decentralized, fragmented and expensive to maintain. While the agency had strong IT operations, it lacked consistent technical standards and operating procedures. Without uniformity, IT managers couldn't be assured, for instance, that a new enterprise-wide application would work everywhere.

To correct these problems, cut IT costs and improve services, the Air Force began consolidating servers and

U.S. Air Force

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■ Organization includes 10 bases, 500,000 personnel and 10 CIOs at major commands

■ Project champion: John M. Gilligan

■ IT department: 80,000

■ Project payoffs: E-mail servers have been cut from 1,400 to fewer than 300. Remote management of desktops has reduced costs by 50%. Some 2,000 Air Force personnel have been freed up to move to other jobs.

networks and setting uniform policy and technical standards. It also began moving to commercial systems, which were already in wide use on many bases, such as Microsoft Corp.'s Active Directory and Systems Management Server, as well as Hewlett-Packard Co.'s OpenView for systems and network management.

"We really didn't have much of an option," says Gilligan. "To do what we wanted to do, we had to rely on commercial technology—it works, and it's pretty good."

In adopting commercial technology, the Air Force is

Interactive Voice Response System

BY BOB BREWEN

RONALD J. CALDERONE, CIO at Reliant Pharmaceuticals LLC, discovered that when it comes to building a sales force automation system,

the human voice makes for a very good interface — at a very good price.

Reliant, a privately held company in Liberty Corner, N.J., that sells hypertension

beta-blockers and cardiac drugs, needed timely data from its salespeople, who call on physicians who prescribe such medications. But Calderone quickly determined that it would cost \$4 million to \$6 million to equip Reliant's sales force, which is projected to grow to 900, with handheld computers and link them into a sales force automation system like those

used by major drug companies. He simply didn't have that money in his budget.

That's when Calderone decided to tap an asset he

salespeople already had — their voices — and couple that with an interactive voice-response (IVR) system called Victor, which



Ronald J. Calderone, CIO, Reliant Pharmaceuticals LLC

stands for Voice Interactive Tracking & Operations Repository. The system provides the company with detailed and timely data on sales calls accessible from a SQL database.

While Calderone declines to provide specific financial details, he says Reliant developed Victor using a combination of commercial speech-recognition technologies for "a cou-



“ [We’re] leveraging information across the spectrum of our war-fighting operations to give us significant combat advantage.”

—JOHN M. GILLIGAN, CIO, U.S. Air Force

ple of hundred thousand dollars.” He says the system, which the company started building in early 2002 and rolled out to its entire sales force about a year later, “had a payback of much less than a year.”

Dan Miller, an analyst at Zelus Group Inc. in San Francisco, says IVR systems offer a low-cost alternative to mobile hardware and sales force automation software.

“IVR systems are not expensive, and they’re not rocket science,” Miller says.

“The true payback is timeliness,” says Calderone, who notes that before Victor, the Reliant sales force used pa-

per forms for call reports. That information took eight weeks to trickle in from an outside data entry contractor. Now, Reliant gets the results of those sales calls overnight, he says.

Using voice prompts, Victor guides sales personnel through a series of questions analogous to data fields, such as doctors called, location, practice and other information. Responses are stored in a SQL database. Victor is so easy to use,

Calderone says, that user training takes about an hour.

Robin McWilliams, Reliant’s manager for telecommunications, says it wasn’t any more difficult to inte-

following a practice that has been gaining steam since the Clinton administration. Federal agencies have been replacing legacy systems with commercial ones with the goal of improving interoperability and integration and reducing costs.

The Air Force’s push is part of a broader U.S. Department of Defense goal for network-centric services delivery. But the Air Force has been “a little bit of a leader” in bringing together commercial off-the-shelf software with existing systems to satisfy those objectives, says Ray Bjorklund, an analyst at Federal Sources Inc. in McLean, Va. The Air Force work is influencing similar efforts at the Navy and DOD, he says.

But the Air Force is holding onto one proprietary technology: its security systems. “The code is not available commercially, and we believe that gives us some additional level of confidence,” says Gilligan.

A major challenge was overcoming cultural resistance from IT organizations that were used to some degree of independence.

First, Gilligan got feedback from top Air Force officials. He then developed measurement metrics and helped foster competition among various commanders in meeting project objectives. With 10 CIOs at major commands reporting to Gilligan, the competition is such “that one organization wants to be out front, so they actually accelerate,” he says.

The Air Force has nearly completed its network and server consolidation and estimates that new abilities such as remote desktop management are helping it save \$200 million per year.

“Our objectives are the same: to give our war fighters a consistent, easily accessible set of capabilities anywhere in the world,” says Gilligan. “And we also hope to get the benefit of some cost efficiencies.” **■ 44362**

grate data from Victor into the company’s systems than it would be to integrate any other type of data. Thanks to Victor, “voice is just another form of data,” he says.

Though Reliant built Victor with existing IVR software and hardware, including Dialogic voice-processing boards from Intel Corp. and speech software from Nuance Communications Inc. and the Sony Pictures division of Sony Corp., Calderone says the company has 32 patents pending on Victor. He adds that Reliant is now looking for a marketing partner to sell the system — which could further add to this project’s payback. **■ 44371**



LEADER IN BEST IN CLASS

U.S. Air Force

GOES COMMERCIAL WITH Network Consolidation Effort

BY PATRICK THIBODEAU

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Reliant

GETS FAST SALES DATA WITH Interactive Voice Response System

BY BOB BREWSTER

RONALD J. CALDERONE, CIO at Reliant Pharmaceuticals LLC, discovered that when it comes to building a sales force automation system,

the human voice makes for a very good interface — at a very good price.

Reliant, a privately held company in Liberty Corner, N.J., that sells hypertension

beta-blockers and cardiac drugs, needed timely data from its salespeople, who call on physicians who prescribe such medications. But Calderone quickly determined that it would cost \$4 million to \$6 million to equip Reliant's sales force, which is projected to grow to 900, with handheld computers and link them into a sales force automation system like those used by major drug companies. He simply didn't have that money in his budget.

That's when Calderone decided to tap an asset the

salespeople already had — their voices — and couple that with an interactive voice response (IVR) system called Victor, which stands for Voice Interactive Tracking & Operations Repository. The system provides the company with detailed and timely data on sales calls accessible from a SQL database.

While Calderone declines to provide specific financial details, he says Reliant developed Victor using a combination of commercial speech-recognition technologies for "a com-



Ronald J. Calderone, CIO, Reliant Pharmaceuticals LLC

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[We're] leveraging information across the spectrum of our war-fighting operations to give us significant combat advantage.

—JOHN M. GILLIGAN

following a practice that has been gaining steam since the Clinton administration. Federal agencies have been replacing legacy systems with commercial ones with the goal of improving interoperability and integration and reducing costs.

The Air Force's push is part of a broader U.S. Department of Defense goal for network-centric services delivery. But the Air Force has been "a little bit of a leader" in bringing together commercial off-the-shelf software with existing systems to satisfy those objectives, says Ray Borklund, an analyst at Federal Sources Inc. in McLean, Va. The Air Force work is influencing similar efforts at the Navy and DoD, he says.

But the Air Force is holding onto one proprietary technology: its security systems. "The code is not available commercially, and we believe that gives us some additional level of confidence," says Gilligan.

A major challenge was overcoming cultural resistance from IT organizations that were used to some degree of independence.

First, Gilligan put feedback from top Air Force officials. He then developed measurement metrics and helped foster competition among various commanders in meeting project objectives. With 80 CIOs at major commands reporting to Gilligan, the competition is such "that one organization wants to be out front, so they actually accelerate," he says.

The Air Force has nearly completed its network and server consolidation and estimates that new abilities, such as remote desktop management are helping it save \$200 million per year.

"Our objectives are the same: to give our war fighters a consistent, easily accessible set of capabilities any where in the world," says Gilligan. "And we also hope to get the benefit of some cost efficiencies." **■ 44362**

plic of hundred thousand dollars." He says the system, which the company started building in early 2002 and rolled out to its entire sales force about a year later, "had a payback of much less than a year."

Dan Miller, an analyst at Zelus Group Inc. in San Francisco, says IVR systems offer a low-cost alternative to mobile hardware and sales force automation software.

"[IVR] systems are not expensive, and they're not rocket science," Miller says. "The true payback is timeliness," says Calderone, who notes that before Victor, the Reliant sales force used pa-

per forms for call reports. That information took eight weeks to trickle in from an outside data entry contractor. Now, Reliant gets the results of those sales calls overnight, he says.

Using voice prompts, Victor guides sales personnel through a series of questions analogous to data fields, such as doctors called, location, practice and other information. Responses are stored in a SQL database. Victor is so easy to use, Calderone says, that user training takes about an hour. Robin McWilliams, Reliant's manager for telecommunications, says it wasn't any more difficult to inte-

Reliant Pharmaceuticals LLC

www.reliant.com

■ **Business:** Markets pharmaceutical products in U.S.-based physicians. Reliant has more than 700 corporate employees and 700 sales reps.

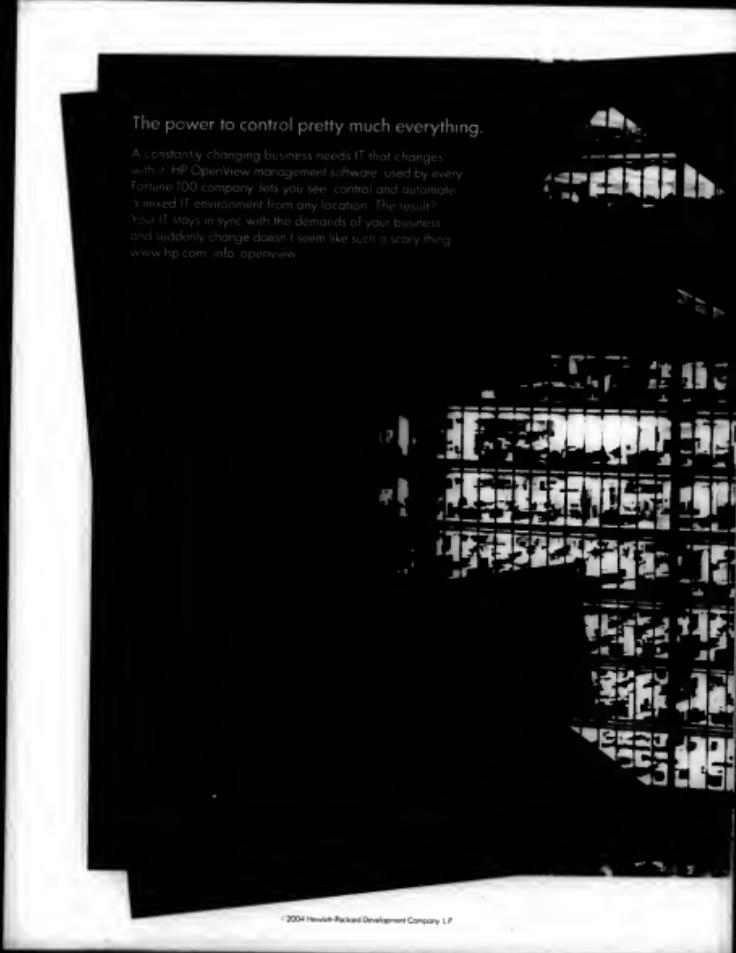
■ **Project champion:** Ronald J. Calderone

■ **IT department:** IS

■ **Project payback:** IVR system was installed at a fraction of the cost of hardware computers. Results of sales calls are now received overnight, instead of the previous turnaround of eight weeks.

grate data from Victor into the company's systems than it would be to integrate any other type of data. Thanks to Victor, "voice is just another form of data," he says.

Though Reliant built Victor with existing IVR software and hardware, including Dialogic voice-processing boards from Intel Corp. and speech software from Nuance Communications Inc. and the Sony Pictures division of Sony Corp., Calderone says the company has 32 patents pending on Victor. He adds that Reliant is now looking for a marketing partner to sell the system — which could further add to this project's payback. **■ 44371**



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IT Integration Project

BY MARY BRANDEL

YOU KNOW you've done something right when you can apply the wisdom gained from one project to save time and money on the next. That's the experience Thomas W. Shelman's team at Northrop Grumman Corp. had when it completed the huge IT integration project necessitated by the acquisition of \$5.1 billion Litton Industries Inc. in 2001.

Considering Northrop Grumman's growth-through-acquisition strategy, that was a pretty important outcome. Since Litton, Northrop has acquired \$2.6 billion Newport News Shipbuilding and \$10.7 billion TRW. According to Shelman, it has integrated those IT systems in half the time it took to do the Litton integration.

"We made sure we captured processes of integration so we could repeat them for future acquisitions," says Shelman, CIO at Northrop. "It is essential for the company to look and act like one company, have efficient and secure access to computing resources from anywhere, one standard network protocol, calendar and desktop image and one way to collaborate."

During the Litton acquisition, Shelman had more than

that hanging over his head. Shareholders were promised a high level of savings, particularly from IT. But his group did better than expected, delivering \$8 million in annual IT savings, expected to grow to more than \$600 million cumulatively over the next 30 years.

But even though the \$12 million project came in on time and \$4 million under budget, it wasn't all smooth sailing. For one thing, Litton was a big pill to swallow. The company had 26 separate IT entities supporting four businesses and 15,000 users at 64 sites.



Shelman's team had to integrate those separate groups into one centrally managed shared service, migrate Litton's Active Directory infrastructure to its own corporate IT resource and move eight e-mail environments to a corporatwide Exchange system. The group also consolidated Litton's 31 separate Internet points into three and two Litton data centers into the primary Northrop data center.

The biggest savings came from centralizing corporate buying. At Litton, each business unit purchased IT equipment without taking advantage of corporate purchasing agreements. Shelman's group negotiated new sourcing contracts based on projected volume and Northrop's accepted hardware and software standards. This not only helped leverage Northrop's buying power but also cemented which products the technical staffs would support.

Shelman says the entire organization now uses standard networks, office products, network security and routers, as well as the IBM WebSphere application integration layer. In addition, it manages suppliers, including SAP as a predominant supplier, with a corporate-level buying agreement.

"We told people, 'Here are the things you get a choice on, and here's what you use that's standard,'" Shelman says. He acknowledges that he met with a tremendous amount of resistance. "It's not easy telling someone to rip out their homegrown ERP system that they've used for decades, but you have to empathize and show people why you're doing it," he says.

Today, the cost of IT as a percentage of sales is 2.5%.



CEO, Northrop Grumman Corp.

That's down from 3% in 2000, before the Litton acquisition.

And savings aren't the only outcome. "The acquisition of a company like Litton brings more than just projects and revenue but relationships and trust that will continue to result in an increasing share of federal IT contracts," says Winn Hardin, an analyst in the aerospace and defense practice at Frost & Sullivan. "Northrop's experience in integrating large acquisitions has served it well in this case."

There are many lessons

that Shelman's group will apply to future acquisitions. One is application scaling. While products such as Exchange readily scale from 40,000 to 120,000 users, "the way we govern the infrastructure had to change several times based on the magnitude of the situation, and that was not always a linear process," Shelman says.

Second: Win over the leaders. "We found that people always align with the management directly above them," Shelman says. He actually hired a consultant to help with what he thought

was an employee-engagement issue. "But once we shored up management, the problem went away," he says.

Third, Shelman says, you can't communicate too much. "Just because you say something, doesn't mean they processed it and can articulate what you said." What might seem like resistance could simply be a lack of true understanding, he says.

☎ 44446

Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.

BEST IN CLASS

Northrop

LEARNS AND GROWS WITH
IT Integration Project

BY MARY BRANDEL

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that hanging over his head: Shareholders were promised a high level of savings, particularly from IT. But his group did better than expected, delivering \$38 million in annual IT savings, expected to grow to more than \$60 million cumulatively over the next 30 years.

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Northrop Grumman Corp.

www.northropgrumman.com

■ **Business:** A \$25 billion global defense and IT company with seven business sectors that offer products and services in systems integration, defense electronics, IT, advanced aircraft, shipbuilding and space technology.

■ **Project champion:** Thomas W. Shelman

■ **IT department:** 23,000

■ **Project payback:** IT delivered annual savings of \$37 million. That figure is expected to grow to more than \$600 million over the next 10 years.

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BEST IN CLASS



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"People thought it wasn't possible. But the team did it," says Guardian Life's Shelley McIntyre.

BY TONY R. WEISS

WHEN the IT department at Guardian Life Insurance Co. decided to install a new life insurance and annuity administration application in 1999, the project seemed to have all the ingredients for success.

The plan was to replace a 30-year-old legacy batch system with a new online system that would allow users to create, view and modify database tables in a real-time environment. The application, Transcend, had just been sold by its former vendor, TriMark Technologies Inc., to Pleasanton, Calif.-based PeopleSoft Inc., and a pleasing new product road map had been laid out that would help Guardian add much-needed capabilities.

With PeopleSoft's bold commitment to an improved Transcend, Guardian decided to move ahead. It deployed the existing application temporarily, modifying it to work with its IT systems until it was time to move to the revamped PeopleSoft release, says Shelley McIntyre, a second vice president of business services at the New York-based mutual life insurance company.

But then things came unraveled. PeopleSoft decided to drop its plans for an up-



date, and Guardian was left with a shaky IT strategy. The options were clear: Either stick with Transcend, which Guardian's IT department was already updating, or start over with a new product.

"That's when we realized this wasn't a temporary solution anymore, but the one that we wanted and the one we wanted to go forward with," McIntyre says.

By that time, even another application from a new vendor would have required customization work. So it made more sense to stick with what they had. McIntyre says. "It was probably the biggest challenge the



team had ever been given," she says.

In just 19 weeks, the 40-member team had to implement the system, create the software interfaces to make it all work and get the new application ready for the company's employees. The hardware and software costs totaled about \$2.2 million, not including staff time, McIntyre says. "Other people in the company named the team the No-Way Team," she says. "People thought it wasn't possible. But the team did it."

By going it alone with a product that no longer had vendor support, Guardian's IT staff had to build its own

expertise — a strategy that had mixed potential. "You've got control over your own destiny for sure," McIntyre says. "I don't think anyone outside the company thought we could do it. But the business team and the IT team thought we had to do it."

Guardian installed the first version of the system in 1999. Since then, the IT team has phased in new features and capabilities, including the ability to conduct Web transactions. Today, about 57 brokerage firms use the updated application to sell their financial products. "It's one standard interface that all the outside broker dealers can use," McIntyre says.

One huge benefit is that the new application allows Guardian to launch financial services products in 90 days, rather than the six to nine months it took with the original software, she says. "We made a huge impact on the business, that's for sure," McIntyre says. The move has also saved 40% on back-office costs. "It was hugely successful," she says. **■ 44357**

Insurance Processing System

Data Center Consolidation

BY LINDA ROSENCRANCE
WHEN Steve J. Bandrowczak and Darel Waite joined DHL International Ltd. in March 2002, the two men embarked on a mission to consolidate the freight company's eight data centers sprinkled throughout North America into one state-of-the-art facility in Scottsdale, Ariz.

"DHL wanted to create a seamless single offering to our customers, like a single invoice or a single Web interface," says Bandrowczak, DHL's CIO. "In order to enable that global logistics business vision, we had to consolidate our IT infrastructure, which included the data center, our network backbone and our key global applications."

The project, also helmed by Waite, who is vice president of operations, was designed to do just that. The goal was to bring together into one facility DHL's global and regional IT functions within North America, including people, computers and business systems.

And they did it, on time and under budget. The total cost of DHL's Americas Information Service consolida-

tion program, completed in December 2002, was \$75.86 million. The project's budget was \$76.15 million.

The consolidation is currently saving DHL about \$24 million a year, and when the company consolidates the IT infrastructure of its latest acquisition, Airborne Express, into the Scottsdale facility in the second quarter of this year, the savings will be more than \$50 million annually, Bandrowczak says.

The information services center in Scottsdale completes a loop of centers circling the globe that provide round-the-clock management of the company's IT services.

The other two centers are in London and Kuala Lumpur, Malaysia. Each center manages DHL's computing and telecommunications network, DHLNet, for a nine-hour shift—eight hours of support plus a one-hour overlap to transfer control from one center to the next. The centers provide support to DHL's 60,000 employees and more than 1 million customers worldwide.

Part of the project included migrating or consolidating 103 Unix, Wintel and AS/400 servers and 8TB of storage from the Redwood Shores, Calif., data center to the Scottsdale facility; migrating Sun Solaris systems to Scottsdale from Tempe, Ariz., and in most cases, converting them to DHL's global open-systems standard HP-UX Ili; and moving the mainframe, tape and print operations units from Houston to Scottsdale.

"We were predominantly open systems, but we had a large mainframe environ-

ment in Houston we had to move," Waite says. "And we had to integrate the mainframe skills into our technical skills. Now the mainframe has become an equal part of the new Scottsdale facility and the new global environment for DHL."

Another challenge was how to capture and transfer some longtime employees' knowledge about the company's core applications, particularly when those employees had decided not to move to Scottsdale. One way was to use a "shadow approach," Waite says.

"We brought on new employees, and they shadowed the legacy employee. They got up to speed, and there was knowledge transfer," Bandrowczak says.

The move to Scottsdale benefits both DHL and its customers, says Satish Jindel,

an analyst at SJ Consulting Group Inc. in Sewickley, Pa.

"By bringing all the IT needs of DHL together, the company has a better understanding of what customers are doing, and it will have positive implications from a cost

point of view and from a customer perspective," Jindel says. "In the long run, everyone will come out ahead."

Donald Broughton, a transportation analyst at A.G. Edwards & Sons Inc. in St. Louis, is impressed with DHL's ability to get the project done fast and inexpensively. "That they accomplished this on time and under budget is heroic given the operational complexity of the business that this information system has been charged with managing," Broughton says. ☐ 44443



Steve J. Bandrowczak, CIO at DHL International Ltd.

DHL
 International Ltd.
 www.dhl.com

BY TODD R. WEISS

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Guardian Life Insurance Co.

www.glic.com

■ **Business:** The fourth-largest mutual life insurance company in the U.S., Guardian has more than 5,500 employees and more than 2,800 financial representatives in 94 agencies. It supplies employee benefits programs to 5 million participants.

■ **Project champion:** Shelley McIntyre

■ **IT department:** 398

■ **Project payback:** New financial services products can be launched in 90 days, and back-office costs were reduced by 40%.

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Guardian

GOES IT ALONE WITH
Insurance Processing System

DHL

REAPS MASSIVE SAVINGS IN
Data Center Consolidation

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DHL
International Ltd.

www.dhl.com

■ **Business:** An express and logistics company, DHL had 2002 sales of \$21.6 billion. Its express service reaches 230 countries and territories.

■ **Project champions:** Steve J. Bandrowicz and Darrel Waite

■ **IT department:** 4,000

■ **Project payback:** The project, which cost \$75.86 million, is saving the company about \$24 million a year. Total annual savings figure is expected to reach more than \$50 million later this year.

BY NATE HANDEL

Consider it one of the largest grid computing projects in the world. J.P. Morgan Chase Investment Bank's pioneering effort to combine seven separate financial risk management systems to share computing power is on target to lower costs while increasing flexibility and service to internal customers.

The idea was hatched back in 2001 to address cost and staffing inefficiencies in the seven systems, which were designed to help traders assess and manage financial exposures such as interest rates, equities, foreign exchange and credit derivatives. Known as the Compute Backbone, or CBB, the new system will eventually combine the power of about 2,000 CPUs that run on 50 midsize servers. Early this year, more than 700 CPUs were on the Compute Backbone in stripped-down blade servers, and 150 CPUs are being added each month.

According to CIO Michael J. Ashworth, the New York-based investment bank spent \$4.5 million upfront on the project, working with Platform Computing Inc. in

J.P. Morgan Chase Investment Bank

www.jpmorgan.com

■ **Business:** Provides investment banking and commercial banking products and services. Also advises on corporate strategy and structure, the raising of capital in equity and debt markets, and risk management.

■ **Project champions:** Michael J. Ashworth and Steven Neiman

■ **IT departments:** 11,000

■ **Project payback:** Lower costs for hardware, reduced development and operational costs and more effective systems management resulted in \$1 million savings in 2003. Another \$5 million in savings are expected this year.

Markham, Ontario, to develop middleware that shares caching resources and provides management, queuing and scheduling.

"We are looking for infinite capacity in our compute [system], and that's a bit of a challenge. But this gives us more progress toward that goal. It's something which is difficult to put a price on," Ashworth says.

Still, initial accounting

shows that the Compute Backbone saved the bank \$1 million in 2003, and another \$5 million in savings are expected this year. The savings come from lower costs for hardware, reduced development and operational costs, and more effective systems management, says Adrian Kunzle, co-head of architecture for investment bank technology.

The Compute Backbone is built on new blade hardware devices, which are "heavily cut-down machines with four processors and a bunch of memory," Kunzle says. Taking into account all areas of savings, the CBB has "taken easily 20% out of the compute-cycle costs," he adds.

Steven Neiman, senior information architect and one of the Compute Backbone's creators, says the grid approach allows the investment bank to reduce operational risk, for instance when an isolated server fails. "You have an ability to respond much more flexibly," he says.

In another show of flexibility, a new credit-trading application was built into the system in just 10 weeks instead of the five months it would have taken before the Compute Backbone, Ashworth says. And because the CBB provides a scalable infrastructure, the investment bank was immediately able to handle new business volume.

According to Almar Abbas, an analyst at Grid Technology Partners in South Hadley, Mass., J.P. Morgan's Compute Backbone is probably the biggest grid computing project in the world, compared with the others that have been publicized and are currently under way. Such projects can lower costs partly because they use inexpensive servers

J.P. Morgan

HARNESSES POWER WITH

Grid Computing System

BY MATT HAMLEN

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The idea was hatched back in 2001 to address cost and staffing inefficiencies in the seven systems, which were designed to help traders assess and manage financial exposures such as interest rates, equities, foreign exchange and credit derivatives.

Known as the Compute Backbone, or CBB, the new system will eventually combine the power of about 7,000 CPUs that run on 50 midsize servers. Early this year, more than 700 CPUs were on the Compute Backbone in stripped-down blade servers, and 150 CPUs are being added each month.

According to CIO Michael J. Ashworth, the New York-based investment bank spent \$4.5 million upfront on the project, working with Platform Computing Inc. in

J.P. Morgan Chase Investment Bank

www.jpmorgan.com

is *tailored* *technology* *to* *meet* *business* *and* *operational* *needs* *for* *building* *personalized* *services*. *Also* *achieves* *an* *optimal* *strategy* *and* *structure*, *the* *ability* *of* *capital* *to* *acquire* *and* *hold* *assets*, *and* *risk* *management*.

is *Present* *disruptive* *Michael J. Ashworth and Steven Neuman*

is *IT department* *UBCO*

is *Present* *profitable* *Lower* *costs* *for* *business*, *reduced* *development* *and* *operational* *costs*, *and* *more* *flexible* *operational* *management* *enabled* *to* *25* *million* *comparable* *2003*. *Another* *25* *million* *to* *revenue* *are* *expected* *this* *year*.

Markham, Ontario, to develop middleware that shares caching resources and provides management, queuing and scheduling.

"We are looking for infinite capacity in our compute (system), and that's a bit of a challenge. But this gives us more progress toward that goal. It's something which is difficult to put a price on," Ashworth says.

Still, initial accounting

shows that the Compute Backbone saved the bank \$1 million in 2003, and another \$5 million in savings are expected this year. The savings come from lower costs for hardware, reduced development and operational costs, and more effective systems management, says Adrian Kuntze, co-head of architecture for investment bank technology.

The Compute Backbone is built on new blade hardware devices, which are "heavily cut-down machines with four processors and a bunch of memory," Kuntze says. Taking into account all areas of savings, the CBB has "taken easily 20% out of the compute-cycle costs," he adds.

Steven Neuman, senior information architect and one of the Compute Backbone's creators, says the grid approach allows the investment bank to reduce operational risk, for instance when an isolated server fails. "You have an ability to respond much more flexibly," he says.

In another show of flexibility, a new credit-trading application was built into the system in just 10 weeks instead of the five months it would have taken before the Compute Backbone, Ashworth says. And because the CBB provides a scalable infrastructure, the investment bank was immediately able to handle new business volume.

According to Abnar Abbas, an analyst at Grid Technology Partners in South Hadley, Mass., J.P. Morgan's Compute Backbone is probably the biggest grid computing project in the world, compared with the six others that have been publicized and are currently under way. Such projects can lower costs partly because they use inexpensive servers

Grid Computing System



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—MICHAEL J. ASHWORTH,
CIO, J.P. Morgan Chase
Investment Bank

that can be added one at a time, he says.

“The money you can save is huge,” Abbas says.

But perhaps more than the technology itself, J.P. Morgan’s IT managers’ enlightened thinking in creating the Compute BackBone has earned Abbas’ praise.

“It’s a very impressive project because of the huge mind-shift away from what they were doing before,” he says. “You are pooling all kinds of IT resources from all areas of the company, and

that’s one huge leap.”

Making the organizational shift meant overcoming skepticism from internal users who had run applications on their own dedicated servers, Ashworth says. “This was a proposed factory for high-end computing, and you were taking away the perceived flexibility that the business units think they have,” he explains. “It was a lot of people to convince.”

Neiman credits the creation of the CBB to bright minds at the investment

bank with roots in the academic world who were encouraged to “defend their ideas in open forums.” This meant that “anybody anywhere in the bank could come up and say, ‘I don’t think you’ve thought this through.’ It was a self-correcting mechanism,” he says.

The team of innovators “wasn’t sitting here saying, ‘We want to build grid computing,’” Neiman adds. Instead, he says, “we wanted to solve the problem we were handed.” ☐ 44461

RealTime Market Interface

BY THOMAS HOFFMAN

IN LATE 2001, San Jose-based energy producer Calpine Corp. saw an opportunity to create a set of real-time interfaces to several energy markets, with the twin goals of improving operational efficiency and gaining a competitive advantage.

The company's \$136,000 IT investment has helped generate or protect millions of dollars in revenue, proving that Calpine succeeded on both counts.

The first interface, launched in January 2002, was applied to load teleme-

try for Calpine's industrial customers in Texas. Previously, gathering this data was cost-prohibitive. Leased-line modems and other equipment could run as high as \$12,000 per customer site and take 60 to 90 days to deploy, says Barbara Kindel, Calpine's director of operations engineering services.

So the energy firm developed an approach that allows it to view customer load data and dynamically schedule those loads through a Cellular Digital Packet Data backbone with the Electric Reliability Council of Texas Inc., the

agency that manages a major portion of the state's electric power grid. In some instances, Calpine uses spread-spectrum radio technology to "hop" to a local data site, says Darrell Scruggs, Calpine's manager of market operations and engineering.

Calpine was able to reduce its implementation costs per interface to \$2,500 and slash deployment time to one or two days, says Kindel.

The top-line impact was even more impressive. The real-time interfaces helped Calpine capture several million dollars in new 2002 revenue from industrial customers in Texas and freed up electricity that could be sold to others, says Dennis Fishback, Calpine's CIO.

According to Zarko Sumic, an analyst at Meta Group Inc. in Stamford, Conn., Calpine's efforts reflect an increased need in the U.S. energy industry for wholesale market transparency. The ability to effectively exchange data

Web-based System

BY LUCAS MEARIAN

WHEN AN INADVERTENT charge is listed on a credit card bill, it's not just the customer who sees red. Settling a disputed charge is one of the costliest components of a credit card company's business.

At Visa U.S.A. Inc. in Foster City, Calif., a new back-office infrastructure will reduce the time and labor required to handle a customer-disputed charge by creating an online, automated process. The company expects

that the system will help it save as much as \$1 billion over the next five years.

"We've implemented the first two releases of the Resolve Online infrastructure, and already we've achieved savings in excess of \$200 million systemwide," says Scott Thompson, Visa's CIO and project leader.

The Visa Resolve Online project, now in its final stage, is a Web-enabled application used to facilitate changes to the re-engineered disputes process. The greatest benefit of the project has been to simplify the current process by elimi-

nating most paper documentation, reducing the time required to resolve disputes and eliminating unnecessary steps in the process, Thompson says.

This Web-based tool gives member banks, merchants and customer support representatives at member banks real-time access to transaction data through secure browser screens or Visa's private IP network, known as Direct Exchange.

"It evolves our back-office infrastructure into a real-time, cardholder-centric system," Thompson says.

Arivah Litan, an analyst at



Scott Thompson, CIO at Visa U.S.A.



Dennis Feltus, Calpine's CEO

among market participants, such as Calpine, and market operators can help participants reduce scheduling and planning time from days or hours to minutes, says Sumic. It also allows the companies to optimize dispatches

to increase the payback on energy generation, he adds.

The project presented Calpine with relatively minor challenges. For the load telemetry interface effort, the biggest challenge was not knowing until Jan. 1,

2002, just how many customer sites would need interfaces, says Kindel.

Meanwhile, big electric customers in Texas were recently given the opportunity to elect to be paid to have their electricity service in-

terrupted under certain conditions, under what's known as the Loads Acting as a Resource (LAAR) program. Beginning last May, Calpine created a set of real-time interfaces to provide these services to large customers through their local retail electricity providers.

Calpine was able to deliver these services by leveraging its existing energy management system, wireless communications and field data acquisition devices and interfacing to the revenue meters and the load's Distribution Control System.

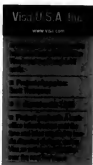
The payoff? Implementation of the LAAR service for just one customer generated a 35-fold return on investment in revenue retention alone, says Finnbakk.

"You don't have to spend hundreds of thousands of dollars to create a competitive advantage," says Kindel. "You can do it by thinking creatively and implementing innovative solutions." **■ 44388**

Gartner Inc. in Stamford, Conn., says handling consumer chargebacks can cost merchants as much as \$50 each. Card-issuing banks and acquiring banks (the banks that back merchants) lose as much as \$25 each. Litan says an online dispute resolution system is "one of the most time-saving, productive features" that a credit card company can implement.

"With a chargeback, [credit card companies] have to produce documentation, get back to the acquiring banks, and the acquirer has to get back to the merchant," Litan says. "Now [Visa] just puts everything in the system and does it."

Visa's original dispute res-



olution process relied heavily on paper and the postal system to communicate with cardholders. In 1999, Visa

formed a working group with card issuers and some merchants to re-engineer the exception rules, processes and systems. The Visa Resolve Online project began in November 2001, and the first version went online in June 2002.

Subsequent releases of Visa Resolve included the ability to create and transmit chargebacks, attach images and supporting documentation and transmit large volumes of images relevant to disputes.

The fourth release of the online product is expected in October and will provide access to Visa's copy request service, fraud reporting and a set of revised dispute rules. The Visa Resolve project has reduced customer service

training time, standardized information exchanged between Visa and its bank and merchant customers, improved quality control with regard to internal processes and cut the time it takes to resolve disputes.

What Visa didn't figure into the projected payback was increased customer satisfaction, which Thompson says was cited by member banks as the highest benefit.

"It has been projected that upon full implementation of Visa Resolve Online in October 2004, disputes will be at least 20% less expensive to process," Thompson says. "Some members believe this number to be closer to 50%."

■ 44631

BEST IN CLASS

Calpine

GENERATES REVENUE WITH
Real-Time Market Interface

BY THOMAS HOFFMAN

IN LATE 2001, San Jose-based energy producer Calpine Corp. saw an opportunity to create a set of real-time interfaces to several energy markets, with the twin goals of improving operational efficiency and gaining a competitive advantage.

The company's \$236,000 IT investment has helped generate or protect millions of dollars in revenue, proving that Calpine succeeded on both counts.

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Calpine Corp.

www.calpine.com

■ **Business:** This energy producer has 98 facilities with a total capacity of about 22,000 megawatts. Another 10 facilities under construction will add 7,000 megawatts to the total.

■ **Project champion:** Dennis Fishback

■ **IT department:** 200

■ **Project payback:** A \$236,000 IT investment has generated millions of dollars in new and retained revenue.

try for Calpine's industrial customers in Texas. Previously, gathering this data was cost-prohibitive. Leased-line modems and other equipment could run as high as \$12,000 per customer site and take 60 to 90 days to deploy, says Barbara Kindel, Calpine's director of operations engineering services.

So the energy firm developed an approach that allows it to view customer load data and dynamically schedule those loads through a Cellular Digital Packet Data backbone with the Electric Reliability Council of Texas Inc., the

agency that manages a major portion of the state's electric power grid. In some instances, Calpine uses spread-spectrum radio technology to "bump" to a local data site, says Durrell Scruggs, Calpine's manager of market operations and engineering.

Calpine was able to reduce its implementation costs per interface to \$2,500 and slash deployment time to one or two days, says Kindel.

The top-line impact was even more impressive: The real-time interfaces helped Calpine capture several million dollars in new 2002 revenue from industrial customers in Texas and freed up electricity that could be sold to others, says Dennis Fishback, Calpine's CIO.

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Visa

RESOLVES CHARGE
DISPUTES WITH
Web-based System

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The payoff? Implementation of the LAAR service for just one customer generated a 37-fold return on investment in revenue retention alone, says Fieback.

"You don't have to spend hundreds of thousands of dollars to create a competitive advantage," says Kindel. "You can do it by thinking creatively and implementing innovative solutions." **■ 44358**

Visa U.S.A. Inc.

www.visa.com

■ **Business:** U.S. consumers hold an estimated \$45 million Visa-brand credit and debit cards.

■ **Project champion:** Scott Thompson

■ **IT department:** 2,800

■ **Project payback:** A back-office infrastructure cut the time and labor required to handle disputed charges, saving Visa an anticipated \$1 billion over the next five years.

olution process relied heavily on paper and the postal system to communicate with cardholders. In 1999, Visa

formed a working group with card issuers and some merchants to re-engineer the exception rules, processes and systems. The Visa Resolve Online project began in November 2001, and the first version went online in June 2002.

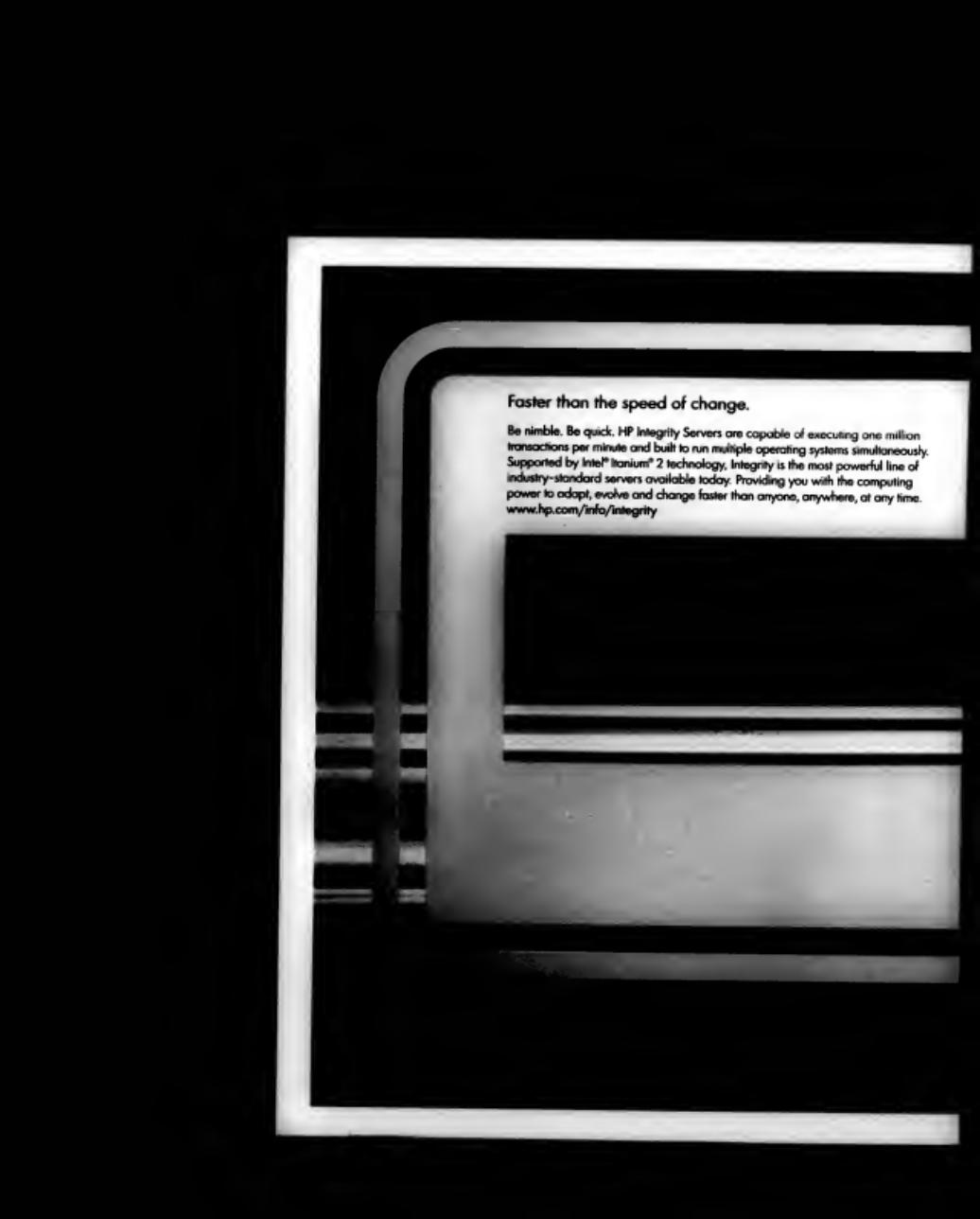
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BEST IN CLASS

Wyndham

CHECKS OUT BENEFITS OF
Centralized Call-Accounting

BY DARY H. ANTHEIS

IT'S AN UNPLEASANT but all-too-common experience: You are checking out of a hotel and are outraged to find your bill littered with long-distance telephone charges, at \$30 to \$20 a pop. And there are about a dozen \$1 charges for local calls — one for every time you connected to the Internet. You stay at hotels in this chain often, you tell the desk clerk, and they ought to treat you better. He agrees to remove the charges, but he makes you wait while he fixes your bill.

Thanks to some innovative work by project leader Mark F. Hedley, that scenario doesn't play out anymore at

Wyndham hotels. Hedley, a senior vice president and chief technology officer at Wyndham International Inc. in Dallas, is the mastermind behind a chainwide, centralized call-accounting system that has reduced operating costs at the company's hotels while removing a key source of customer dissatisfaction.

On a central server in Dallas that interfaces to each hotel, the new system keeps track of telephone rates that can vary by hotel, corporate customer, guest group, date or even by individual guest. A Wyndham salesperson can, for example, promise a convention group a block of rooms with a special long phone rate for the duration of their stay and be confident that the group will get that rate — automatically and transparently.

The system also recognizes Wyndham's 800-quest premier members and ensures that they get free long-distance and local telephone service and free high-speed Internet access. It also supports administrative functions such as call-pattern analysis and compliance with national carrier contracts.

The call-accounting system eliminated more than 100 local systems and is expected to produce a 269% return on investment over five years, not counting additional revenue it might bring from

happy guests, says Hedley.

"This is the first time in the industry this has been done, first and foremost, on a centralized basis," he says. "It used to be a tremendous overhead for a hotel to keep the rate tables up to date, to keep the equipment configured properly and so on."

"It's pretty slick," says W. Douglas Lewis, a senior partner at Edge Consulting Group LLC in Atlanta and former CIO at InterContinental Hotels Group. "It allows your frequent stayers to automatically get the charges not put on the bill. It

Wyndham
International Inc.

www.wyndham.com

■ **Business:** Based in Dallas, Wyndham International owns, leases, manages and franchises hotels and resorts in the U.S., Canada, Mexico, the Caribbean and Europe.

■ **Project champion:** Mark F. Hedley

■ **IT department:** 67

■ **Project payback:** Guest call-accounting system eliminated more than 100 local systems and is expected to produce a 269% return on investment over five years.

Centralized Call-Accounting

BY GARY H. ANTHEB

IT'S AN UNPLEASANT but all-too-common experience: You are checking out of a hotel and are outraged to find your bill littered with long-distance telephone charges, at \$30 to \$20 a pop. And there are about a dozen \$1 charges for local calls — one for every time you connected to the Internet. You stay at hotels in this chain often, you tell the desk clerk, and they ought to treat you better. He agrees to remove the charges, but he makes you wait while he fixes your bill.

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The system also recognizes Wyndham's ByRequest premier members and ensures that they get free long-distance and local telephone service and free high-speed Internet access. It also supports administrative functions such as call-pattern analysis and compliance with national carrier contracts.

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"It's pretty slick," says W. Douglas Lewis, a senior partner at Edge Consulting Group LLC in Atlanta and former CIO at InterContinental Hotels Group. "It allows your frequent stayers to automatically get the charges net put on the bill. It





removes one of the largest dissatisfiers of hotel guests."

Lewis also praises the system's architecture. "They have managed to link their ByRequest database in with their call-accounting system and the PBXs in the hotels. That's technically very interesting," he says.

Some of the project's innovations were more prosaic. It was necessary to install a brick-size data-collection and network-interface device at every hotel, but Hedley didn't want to bear the cost of sending an IT person to each site to do that. "We

created a very extensive set of instructions, a book, on how to install the device," he says. "We had to make it so anyone could install it, but here we were asking them to touch the parts of a phone system that you generally wouldn't touch."

Senior project manager Doug Oppenheimer wrote the instructions and even photographed a Phillips screwdriver to show the installers what one looks like. "I came from a hotel before getting into IT," says Oppenheimer. "I said, 'How would someone who never saw a

computer deploy this device properly the first time?'"

Oppenheimer also set up a Web site with frequently asked questions about the new system, created a training course that could be downloaded or obtained on a CD, and beta-tested everything at two hotels.

"The whole implementation of that device went seamlessly, vs. what a disaster it could have been and how much time and cost it could have added," Hedley says. "We did the entire system rollout in 90 days."

☛ 44360



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— MARK F. HEDLEY,
senior vice president and CTO,
Wyndham International Inc.

Self-service Filing Portal

BY STEVE ULFELDER

IN LATE 1997, Ohio's state legislature passed a bill ordering government agencies to streamline convoluted processes in the areas of workers' compensation, employer tax withholding and tax filing.

The legislators were, admirably, responding to businesses' concerns about the amount of time required for these administrative tasks. But they didn't address details such as funding and project ownership, and so Ohio House Bill 202 made little headway for two years.

When Gregory S. Jackson signed on as Ohio's CIO in 2000, he made meeting the demands of the unfunded mandate an immediate priority because, Jackson says,



Gregory S. Jackson,
CIO of the state government of Ohio

he agreed with the legislature that a more user-friendly system was important for the state's employers. The resulting portal, dubbed the Ohio Business Gateway, has exceeded demands at every turn. Small and medium-size businesses use the portal's single interface to transact with the state taxation, workers' compensation, family services and administrative services agencies; the time they spend on such tasks has dropped 36%, state studies show.

Jackson concedes that gaining the agencies' initial cooperation was the toughest part of the project. Gartner Inc. analyst John Kost isn't surprised. "The main currency of government isn't income or wealth. It's power," he says.

BY MARC L. BONNINI

WHEN network hardware maker Nortel Networks Ltd. began a major CRM initiative in 2000, the goal was to connect all customer-facing processes and, in so doing, slash support costs and boost sales.

Because Nortel had many individual business units that catered to different market segments, there were more than 25 sales and 130 customer support systems in place, some overlapping. The system was clearly inefficient: For example, it took 50 seconds for customer service agents to answer calls at peak

times, and the abandoned call rate was nearing 7%.

"Our customers were quickly becoming frustrated," says project leader and CIO Albert Hitchcock, who is based in Research Triangle Park, N.C.

The project's main goal was to have one integrated system that could handle the entire customer experience, from point of sale to product installation and support.

To do this, Nortel executives decided to consolidate the company's various legacy CRM systems into one built around Andocs Ltd.'s Clarify software. This required a phased rollout, prioritized based on business needs and evaluated by a mixed business and IT review board. Each individual upgrade had to be financially

Integrated CRM System

"So creating a multi-department portal is almost by those agencies as diminishing their power. That's going to affect their behavior."

In 2000, Jackson says, he told a group of outside consultants who were evaluating state processes that "we were having trouble getting traction" with the project. Those consultants recommended that a director from an affected agency be persuaded to own the project. "That way, it would clearly be an agency priority," Jackson says, "not just another IT project within each agency."

At that point, Jackson got some help when Ohio Gov. Bob Taft became involved and requested that the Ohio Department of Taxation director take on sponsorship. "That was an amazing turning point," Jackson says. Not only was the project kick-started, but the ensuing dis-

State of Ohio

www.ohio.gov

- Organization: The 30th largest state by land area in the U.S., Ohio covers 44,826 square miles. Its state capital and largest city is Columbus.
- Project champion: Gregory S. Jackson
- IT department: 2,000
- Project objective: In its investment of \$1.25 million for initial development, the state expects to realize 30% time savings for Ohio businesses and a 40% drop in transaction costs for the state agencies involved.

cussion expanded the gateway's scope. It was originally planned as a mere registration tool, but Jackson and the new sponsor agreed to make it a more ambitious transactional portal.

The next challenge was to

fund the project. Jackson carried out \$1.25 million for initial development, and in early 2002 a large-scale pilot was launched. The Ohio Business Gateway became fully functional in 2003; program director Joe Zapotosky estimates ongoing operational costs at \$1.5 million annually.

By all accounts, the gateway was an immediate smash hit. In addition to the 36% time savings enjoyed by Ohio businesses, the state itself has reduced transaction costs for the affected agencies by 42%, according to Jackson. "Ohio deserves great credit for putting this together," Gartner's Kost says.

Jackson says that if he regrets anything about the project, it's that because of time pressures, "we didn't spend as much time on the IT architecture as we might have liked to." The state made some use of Web ser-

vices, he notes, "but there wasn't a lot of time spent thinking about how [the portal] is going to play out in five years." In particular, Ohio used a Microsoft-based architecture but did the bulk of its development without exploiting the vendor's .Net.

Among the state's next steps are possibly shifting to .Net and adding an XML interface, Zapotosky says. Already, Jackson's team has expanded the Ohio Business Gateway to the local-taxation level, and the state is working with the Internal Revenue Service to allow Ohio businesses to pay federal taxes at the portal, too.

Small wonder that the portal has been widely imitated by other states.

◻ 44388

Ulfelder is a freelance writer in Southboro, Mass. Contact him at sulfelder@charter.net.

justified based on its merits.

By breaking the project into parts, the IT team ultimately was able to put together a huge single instance of CRM software, says Beth Eisenfeld, an analyst at Gartner Inc. Nortel executives probably wouldn't have approved the project's final price tag, she adds, if it had been presented in one lump sum.

Ultimately, the project, which cost a total of \$30 million, came in on time and on budget and has resulted in one of the largest CRM implementations in the high-tech industry, Nortel claims.

There are 19,200 internal users on the system, along with 200,000 customers and

partners who can access the Nortel service applications.

There is now one major call center, down from three, and the number of world-wide toll-free numbers has dropped from 300, to 20.

Nortel has also saved \$15 million by retiring some of its legacy systems.

The customer payback has been even bigger: Customers are now able to configure a switch, check an order, track a service ticket or access doc-

umentation online. The abandoned-call rate dropped from 7% to 2%, and the average time to answer a call dropped from 50 seconds to 14. The entire sales cycle has also shrunk, from 100 to 60 days.

The company did learn a few lessons along the way. In 2002, for example, Nortel found that it needed to create a reporting system to make sure the right people got the data appropriate for them. With business intelligence software from Business Objects SA, Nortel created a reporting system built around 14 individual data marts.

This has resulted in a rise in storage costs, up 15% annually, and the staff is now reviewing the system to ensure that only pertinent data is being extracted.

The company was moving fast to get people running on the system, but in hindsight, it should have spent more time doing some training, according to Mary Kay Wells, vice president of value chain



solutions at Nortel.

"If we needed to do it again, we'd emphasize the training," Wells says.

◻ 44621



Albert Hirschbach, CEO of Nortel Networks Ltd.

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■ **Project champion:** Gregory S. Jackson

■ **IT department:** 2,000

■ **Project payback:** An investment of \$1.25 million for initial development has returned 36% time savings for Ohio businesses and a 42% drop in transaction costs for the state agencies involved.

cussion expanded the gateway's scope. It was originally planned as a mere registration tool, but Jackson and the new sponsor agreed to make it a more ambitious transactional portal. The next challenge was to

fund the project. Jackson carved out \$1.25 million for initial development, and in early 2002 a large-scale pilot was launched. The Ohio Business Gateway became fully functional in 2003, program director Joe Zapotosky estimates ongoing operational costs at \$1.5 million annually.

By all accounts, the gateway was an immediate smash hit. In addition to the 36% time savings enjoyed by Ohio businesses, the state itself has reduced transaction costs for the affected agencies by 42%, according to Jackson. "Ohio deserves great credit for putting this together," Gartner's Kord says.

Jackson says that if he regrets anything about the project, it's that because of time pressures, "we didn't spend as much time on the IT architecture as we might have liked to." The state made some use of Web ser-

vices, he notes, "but there wasn't a lot of time spent thinking about how [the portal] is going to play out in five years." In particular, Ohio used a Microsoft-based architecture but did the bulk of its development without exploiting the vendor's .Net.

Among the state's next steps are possibly shifting to .Net and adding an XML interface, Zapotosky says. Already, Jackson's team has expanded the Ohio Business Gateway to the local-taxation level, and the state is working with the Internal Revenue Service to allow Ohio businesses to pay federal taxes at the portal, too.

Small wonder that the portal has been widely imitated by other states.

■ **44368**

Ulfelder is a freelance writer in Southport, Mass. Contact him at sulfelder@charter.net.

justified based on its merits.

By breaking the project into parts, the IT team ultimately was able to put together a huge single instance of CRM software, says Beth Eisenfeld, an analyst at Gartner Inc. Noriel executives probably wouldn't have approved the project's final price tag, she adds, if it had been presented in one lump sum.

Ultimately, the project, which cost a total of \$30 million, came in on time and on budget and has resulted in one of the largest CRM implementations in the high-tech industry, Noriel claims.

There are 10,300 internal users on the system, along with 200,000 customers and

partners who can access the Noriel service anytime.

There is now one major call center, down from three, and the number of worldwide toll-free numbers has dropped from 500 to 20.

Noriel has also saved \$35 million by retiring some of its legacy systems.

The customer payback has been even bigger: Customers are now able to configure a switch, check an order, track a service ticket or access docu-

mentation online. The abandoned-call rate dropped from 7% to 2%, and the average time to answer a call dropped from 30 seconds to 14. The entire sales cycle has also shrunk, from 100 to 60 days,

The company did learn a few lessons along the way. In 2002, for example, Noriel found that it needed to create a reporting system to make sure the right people got the data appropriate for them. With Business Intelligence software from Business Objects SA, Noriel created a reporting system built around 14 individual data marts.

This has resulted in a rise in storage costs, up 15% annually, and the staff is now reviewing the system to ensure that only pertinent data is being extracted.

The company was moving fast to get people running on the system, but in his sight, it should have spent more time doing some training, according to Mary Kay Wells, vice president of value chain

Noriel Networks Ltd.

www.norielnetworks.com

■ **Business:** A telecommunications equipment maker that produces core switching, wireless and optical systems for telephone carriers and data service providers worldwide.

■ **Project champion:** Albert Hitchcock

■ **IT department:** 1,650

■ **Project payback:** Noriel has saved \$15 million by retiring some of its legacy systems and has reduced its abandoned-call rate from 7% to 2%.

solutions at Noriel.

"If we needed to do it again, we'd emphasize the training," Wells says.

■ **44621**



Albert Hitchcock
CEO at Noriel Networks Ltd.

change

hp

Solutions for the

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for Business

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Distinctive IBM innovations

System Features

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IBM ThinkPad T41
Distinctive IBM innovations

System Features

\$1,699*

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...new territory can be a walk in the park.

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...networks — wherever you're at: on airport, the office, an Internet café, even
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Continued from page 27

As the leader of the group, Rybeck plays a role that includes establishing and communicating data standards, ensuring data integrity is maintained during database conversions and doing the logical design for the data warehouse tables. She'll also oversee implementation of the Group 1 Software Inc. data cleansing system and work with The Dun & Bradstreet Corp., whose database is used for company name standardization and hierarchies.

The analysts have their work cut out for them. Bringing together customer records from the 75 business units yielded a 75% duplication rate, misspellings and fields with incorrect or missing data.

"Most of the divisions would have sworn they had great processes and standards and place," Rybeck says. "But when you show them they entered the customer name 17 different ways, or someone had entered 'Loading dock open 8000-400' into the address field, they realize it isn't as clean as they thought."

Multitalented

Although the data steward may report to IT — as is the case at Emerson and at pharmaceuticals company Sanofi-Synthelabo Inc. — it's not a job for someone steeped in technical knowledge. Yet it's not right for a business person who's a technophobe, either.

You need someone who's familiar with both disciplines, like Seth Cohen. The first data quality control supervisor at Sanofi in New York, Cohen was hired a year ago to help design automated processes to ensure the data quality of the customer knowledge base that Sanofi was beginning to build.

Cohen has enough technical skills to be able to spot out a data-cleansing system and then work with a developer to make sure that the system is written correctly.

But having worked in the pharmaceutical field for three and a half years, he also knows the industry's specific business rules and understands the most important data concerns that must be addressed during the requirements gathering stage.

Data stewards should have business knowledge because they need to make judgment calls, Cohen says. With Sanofi's data warehouse, for instance, if the system expects to get numbers in a field but gets a string of letters instead, Cohen must decide what's

wrong and how to correct it.

Mary Pickett is another data steward who has a mix of skills. When she joined Winston & Strawn LLP, a law firm in Chicago, she considered herself a database specialist. Today, however, her title is "marketing applications specialist," and one of her primary duties is to ensure the quality of Winston & Strawn's contact database.

"Especially in this economy with people moving around, it's a highly changing, dynamic database that keeps changing," Pickett says. "If it sits for a month, it's dirty again."

Pickett prefers to train business users from within the company to keep the data clean. Likely candidates include paralegals or secretaries who manage contact lists for their practice groups. Still, she says, it takes a solid year for data clerks like them to gain the necessary experience to move up to data coordination.

The reason: They need to learn not only how to sort through duplicate

company names, make sure contact names are associated with companies and use the database's cleansing tools, but also how to prioritize which clients are the most important to work on. "We want to keep our top clients as clean as possible," Pickett says.

Perfection Unattainable

Indeed, judgment is a big part of the data steward's job — including the ability to determine where you don't need 100% perfection.

At OneSource Information Services Inc., a provider of business information products in Concord, Mass., orientation sessions include a speech on the inevitable dirtiness of data. But at the same time, says Beth Janacus, director of content management at OneSource, the company "lives and dies by data quality." So where do you draw the line? That's where data stewards come in, devising what's "clean enough."

Cohen says that task is one of the biggest challenges of the job. "100% accuracy is just not achievable," he says. "Some things you're just going to have to let go or you'd have a data warehouse with [only] 15 to 20 records."

A good example is when Sanofi purchases data on doctors that includes their birth dates, Cohen says. If a birth date is given as Feb. 31 or the number of the month is listed as 13 but the rest of the date is good, do you throw out all of the data or just figure the birth date isn't all that important?

It comes down to knowing how much it costs to fix the data vs. the paycheck. "You can pay millions of dollars a year to get it perfect, but if the returns are in the hundreds of thousands, is it worth it?" asks Chuck Kelley, senior advisory consultant at Navigator Systems Inc., a corporate performance management consultancy in Addison, Texas.

Good Diplomats

Data stewards also need to be politically astute, diplomatic and good at conflict resolution — in part because the environment isn't always friendly. When Cohen joined Sanofi, some questioned why he was there. In particular, IT didn't see why he was "causing them so many headaches and adding several extra steps to the process," he says.

There are many political traps, as well. Take the issue of defining "customer address." If data comes from a variety of sources, you're likely to get different types of coding schemes. "Everyone thinks theirs is the best approach, and you need someone to facil-

Resolving the Data Steward

Here's the career path of **Nancy J. Rybeck**, data administrator at Emerson Process Management.



RYBECK

MAY 2000 - PRESENT
Emerson Process Management
Data warehouse architect, project manager, data administrator

OCTOBER 1997 - MAY 2000

McLain Company Inc.:
Data administrator

1985 - 1997

Texas Association of School Boards:
Senior technical consultant, assistant director of MIS/software engineering, assistant director of data services/operations development, manager of systems and programming, programmer/analyst

1980 - 1985

CarboMedics Inc.:
programmer/analyst

EDUCATION:

Bachelor of arts degree in computer science, St. Edward's University, Austin

itate," says Robert Seiner, president and principal of KIR Consulting & Educational Services in Pittsburgh.

People may also argue about how data should be produced, he says. Should field representatives enter it from their laptops? Or should it first be independently checked for quality? Should it be uploaded hourly or weekly? If you have to deal with issues like that, and "you're argumentative and confrontational, that would indicate you're not an appropriate steward," Seiner says.

Most of all, data stewards need to understand that data quality is a journey, not a destination. "It's not a one-shot deal — it's ongoing," Rybeck says. "You can't quit after the first task."

☎ 45006

Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.

DATA STEWARDS AT A GLANCE

Responsibilities

- Create business naming standards
- Standardize entity definitions
- Standardize attribute definitions
- Specify business rules
- Standardize calculation and communication definitions
- Create entity and attribute aliases
- Conduct data quality analyses
- Manage sources of data for the data warehouse
- Specify data security
- Develop data retention criteria

Nontechnical Skills Required

- Solid understanding of the business
- Excellent communications skills
- Objectivity
- Creativity
- Diplomacy
- Ability and willingness to work as part of a team
- Well-respected knowledge of the subject area
- Well-respected knowledge of the relevant corporation

Continued from page 27

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Emerson Process Management
Data warehouse architect, project manager, data administrator

McLane Company Inc.
Data administrator

Texas Association of School Boards
Senior technical consultant, assessor, test director of MIS software engineering, assistant director of data services/application development manager of systems and programming, programmer/analyst

CarleMedics Inc.
programmer/analyst

Bachelor of arts degree in computer science, St. Edward's University, Austin

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Q 45006

Brundel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brundel@comcast.net.

DATA STEWARDS AT A GLANCE

Company: Emerson Process Management

Position: Data administrator

Education: Bachelor's degree

Experience: 10 years

Previous employer: KIK Consulting & Educational Services

Previous employer: Texas Association of School Boards

Previous employer: CarleMedics Inc.

Previous employer: McLane Company Inc.

Previous employer: Navigator Systems Inc.

Previous employer: Winston & Strawn LLP

Previous employer: Sanofi-Synthelabo Inc.

Sanofi-Synthelabo Inc.

Emerson Process Management

McLane Company Inc.

CarleMedics Inc.

Navigator Systems Inc.

Winston & Strawn LLP

Texas Association of School Boards

KIK Consulting & Educational Services

Emerson Process Management

BRIEFS

Emerson Taps CIO From Invenys

Emerson Electric Co. in St. Louis recently named Stephen C. Hassell as CIO. He will be responsible for customer-focused IT programs, including telecommunications, applications and hosting for the electrical products company. Hassell previously was CIO at London-based Invenys PLC.

Briggs & Stratton Expands AT&T Deal

Briggs & Stratton Corp., which makes engines for outdoor power equipment, awarded AT&T Corp. a multimillion-dollar global network contract. The contract covers an existing deal for long-distance, Internet, teleconferencing and domestic data services. It also adds AT&T managed international data service and increased networking capacity.

Reader's Digest Outsources Big Iron

The Reader's Digest Association Inc. in Pleasantville, N.Y., recently confirmed that it has signed a long-term agreement to outsource mainframe operations to Infocrossing Inc. in Lenexa, Kan. Infocrossing has already taken over Reader's Digest's data center operations and is planning a June migration of the mainframe computing infrastructure to Infocrossing's data center.

Digital River Hosts Online Toy Store

Minneapolis-based Marquette Group LLC, known as Marquette Toy, last week launched an online toy store built and hosted by e-commerce outsourcing firm Digital River Inc. Eden Prairie, Minn.-based Digital River not only hosts the specialty retailer's site (www.marquettetoy.com), but also provides order management, product fulfillment, customer service, e-marketing and fraud-prevention screening.

Going Beyond Strategic Platitudes

BARBARA GOMOLSKI

CONVENTIONAL WISDOM says that if you're looking to develop an IT strategy, you start with the business strategy and go from there. On the surface this makes sense, but it almost never works. Business strategies are often vague and downright meaningless. Browse a handful of annual reports, and you'll see what I mean. Strategic goals like "product excellence," "increased shareholder value," "growth through acquisition" and "improved customer satisfaction" don't say much about what's in store for the company from a business perspective, let alone what the IT organization should do.

To create a good IT strategy, IT leaders have to rethink the whole concept of strategy development. Most IT professionals are introduced to the concept of strategic planning by business people, who devise their plans by looking at the marketplace. Business people consider which markets the company will compete in, which products and services they will sell and how they will execute on those plans. That's great, but it's very different from the way good IT leaders develop strategy.

Let's assume that a company has the best strategic business planners in the world. These business planners have scanned the market and have developed a fully fleshed-out plan to build and sell products. They even have an excellent operational plan. Even in this unlikely scenario, the business strategy probably won't tell the IT leaders exactly what they need to focus on.

Recognizing this, the IT leadership corners the business people and tries to "extract" more information from



them in order to develop an IT strategy. This doesn't work, either, because the business people don't fully understand the IT implications of their business plans. If they did, they might not need a CIO!

A Better Way

While developing an IT strategy is difficult, it's worth doing. Instead of looking at high-level business strategies for guidance, IT leaders should be gathering

information about key areas of the business in order to determine their strategy. For example, looking at the following areas will tell you more about what's in store for IT than those business-plan platitudes:

Geographic expansion and corporate virtualization. Consider how far the IT organization will have to extend itself in the coming year. Is the company moving into new geographies? If so, how? Also, look at how IT will have to change or evolve to support an increasingly virtual enterprise. Consider the needs and issues that remote em-

ployees and disconnected business partners will present to IT.

Governance and compliance. How is the company planning to make key decisions in the future? With a renewed focus on corporate governance, IT decision-making is evolving in many companies. These changes will affect the kinds of IT initiatives that are funded in the coming years. Also consider how compliance with the latest regulatory requirements will influence IT priorities.

Future of the business. How is the business evolving? A company that's changing from being a manufacturer to being a marketing company is going to see a major shift in its IT priorities. Consider what the IT road map might look like as the business undergoes its transformation. This is also a good time to look at how customer needs are changing and how those changing needs will affect IT.

Business attitude toward IT spending. For the past two years, most companies have been in a cost-cutting mode regarding IT, which has had a significant effect on IT strategies. As the economy improves, consider how business leaders' attitudes toward spending money on IT will also change. Consider whether the willingness to invest in IT will keep pace with or lag the economic recovery.

These are some of the main issues to consider when developing an IT strategy, but it's not an exhaustive list. IT leaders will still need the help of business executives to develop an IT road map. But they shouldn't expect the business strategy to miraculously lead them to an IT strategic plan. ☐ 44093

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ASK THE EXPERTS.**

Microsoft

"Although the Linux OS itself is nominally free, Linux is only one component of an increasingly complex application infrastructure stack.... From a total-cost-of-ownership perspective, we believe the overall application costs of integration and ongoing infrastructure management and support far outweigh one-time, upfront hardware and OS software costs."

—META Group, November 2002
Linux Servers: No "Silver Bullet" for Total Cost of Ownership

Leading independent research analyst META Group found in a recent study that Linux on Intel infrastructure costs are *not* lower than Windows® on Intel. To get the full study and other third-party findings, visit microsoft.com/getthefacts

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Privacy Potholes

IT managers like Nationwide Mutual's Kirk Herath (left) offer advice for avoiding process and technology potholes when complying with privacy regulations. **PAGE 36**



Losing Control

IT pros offer tips for controlling sensitive customer data when it's in the hands of third-party outsourcing. **PAGE 38**

OPINION

RFID Privacy Scare Is Overblown

Columnist Jay Cline says the RFID community needs to counteract the public hysteria about possible privacy abuses. **PAGE 44**

Compliance Headaches

**SPECIAL
REPORT**

A patchwork of inconsistent and vague laws make it tough for IT to do the right thing.

EDITOR'S NOTE

I ADMIT IT: I was a policy wonk. At this newspaper's Washington correspondent many years ago, I covered literally hundreds of congressional hearings—many of them about privacy. I had my nose in the fine print of the *Federal Register* and the *Congressional Record*. I huddled with anonymous congressional staffers to get the latest markup drafts of bills in subcommittee. I used to be able to quote key passages from my dog-eared copies of the Computer Fraud and Abuse Act and the Electronic Communications Privacy Act. I sat in the Capitol galleries and watched votes for landmark legislation.

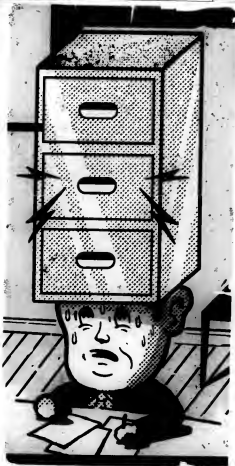
And I was naive. I thought that the young staff attorneys drafting the legislation knew what was best for the country. I scoffed at industry complaints about various provisions

being too hard to implement. Businesses also feared a hodgepodge of privacy laws across the 50 states, but I was skeptical of arguments for federal preemption of state privacy laws.

Older and wiser now, I know that those inconsistent and vague laws can make it tough for IT managers to comply even when they truly want to. The best intentions of those young staff attorneys can cause serious headaches for business folks outside the Capital Beltway, as the first story in this special report shows.

I still think policy-makers do the best they can when they write the laws. But I've learned that the law of unintended consequences is the most powerful law of all. **© 45078**

Mitch Betts is Computerworld's Features editor. Contact him at mitch_betts@computerworld.com.



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COMPANIES WORKING hard to comply with a bewildering array of fast-changing state, federal, international and industry-specific privacy rules are uncovering a variety of practical problems along the way.

Rising concerns over personal privacy and data-sharing practices have focused on increased liability risks relating to how personal data is handled. At the same time, the trend toward extending the enterprise is making it harder than ever for companies to keep track of and protect such data.

IT managers dealing with these privacy regulations offer their best advice for avoiding the technology and process potholes.

POTHOLE:

Patchwork of Laws

The sheer number of privacy regulations and new mandates coming down the pike make privacy compliance a huge challenge, says Kirk Herath, chief privacy officer at Nationwide Mutual Insurance Co.

Some of the biggest drivers include the Health Insurance Portability and Accountability Act, the Gramm-Leach-Bliley Act, the Sarbanes-Oxley Act and California's SB 1386 identity protection bill. On the horizon are other state and federal versions of SB 1386. Several states — most notably California — have their own privacy laws. International rules, such as those covering European Union nations and Canada, are also forcing U.S. companies to confront privacy issues.

"Over the past two years, we've had

over 1,000 new privacy laws that have affected us," says Joel Tietz, chief privacy officer at AXA Financial Services LLC in New York.

SIDESTEP: Instead of trying to craft policies for every single law, it's often better to try to comply with the requirements of the most stringent laws where possible, privacy experts say. Don't shoot for meeting the minimum requirements, Tietz adds. "We took the best of what we saw in all of the various requirements," he says. The company then crafted a policy to meet those standards.

POTHOLE:

Complex Requirements

Writing a standard privacy notice that encapsulates all regulatory and legal requirements can be a huge challenge, Herath says. Privacy notices, which are required in every state, spell out a company's policies for handling personal data. Several laws require companies to clearly articulate what they can or can't do with confidential information. But differing requirements make it hard to draft a standard policy, Herath says.

For instance, at least 17 states still use privacy provisions from a 1982 information practice act that requires insurance companies to use specific phrases — relating to how information might be shared for law enforcement purposes, for example — when crafting a privacy policy.

Much of the language contained in such laws is written at a college reading level. "Yet you have to economize on your language and the complexity

of what you are saying" to get the notice down to a ninth-grade reading level to meet some state requirements, says Herath. For instance, "instead of talking about how we can share information for law enforcement and anti-fraud purposes, you boil it down to 'as required by law,'" he says. Similarly, some states require that companies include opt-in policies in their privacy statements. Opt-in policies require companies to seek and receive a

user's permission to collect and use personal data.

SIDESTEP: Here again, Herath suggests making the policy as broadly applicable as possible. Start with the most stringent requirements first and draft a policy statement written for those requirements.

"It can be done, but not easily," says Herath. Drafting a solid policy can take several weeks to several months and



Putting privacy legislation into practice means learning how to sidestep legal and technical problems. By Jaikumar Vijayan

Privacy Potholes

requires input from business units as well as legal and compliance teams," says Herath, who manages 35 such notices for Columbus, Ohio-based Nationwide's business units.

POTHOLE:

Far-flung Data

But it's not enough to say what you'll do. You also need to do what you say. And that means putting in place the technology and processes to monitor and ensure compliance with stated privacy policies, experts say.

"The biggest issue facing corporations with respect to privacy is establishing control over all their data," says Arshad Noor, CEO of StrongAuth Inc., a Cupertino, Calif.-based authentication management firm.

This data includes not only what's on production systems and backup servers and sites, but also everything stored on distributed client systems and flowing across enterprise and partner networks, he says.

SOBSTEP: To gain control, says Noor, companies must establish a detailed inventory of all sensitive data everywhere in the corporation, review all controls relating to the use of that data and set up controls and procedures to protect the data.

"All of this will require capital expense, potentially hiring new people and buying new tools," he says.

POTHOLE:

Honoring Customer Preferences

Technology advancements have made it easier for companies to use and manipulate customer data, but that also makes it imperative to monitor and ensure privacy compliance, says Tietz.

For example, because AXA's CRM systems allow it to mine customer data, the company has to be careful that the information isn't being combined or shared in a manner that doesn't fit with a customer's privacy preferences, Tietz says.

"I view technology as one of my



SOURCE: "THE COST OF PRIVACY PROTECTION" AND HOW TO MANAGE IT WITH LEGAL, ETHICAL, AND FINANCIAL RISK

backstops to ensure that data is not flowing in an inappropriate manner," he says.

SOBSTEP: AXA has built a database that consolidates customer information from multiple applications and production systems. Each customer record in the database has an embedded "privacy indicator" that describes in detail that customer's privacy preferences. The database is linked to every legacy application at AXA. The goal is to make sure that a customer's privacy preferences are always respected, regardless of which application is accessing the customer data, Tietz says.

"Many departments are charged with using customer information to make a profit for the company," Tietz says. "An aggressive use of such information may be beneficial to the bottom line but must always be weighted against privacy needs."

AXA, which manages more than \$450 billion in assets, also uses a Web monitoring tool to ensure that the information on its Web pages and its use of cookies are compliant with the company's stated privacy policy, Tietz says.

POTHOLE:

Vague Language

The lack of legal precedent and implementation guidelines poses a problem for companies trying to figure out the best way to mitigate exposure to legal risk, says Erin Kenneally, a forensic analyst at the San Diego Supercomputer Center at the University of California, San Diego.

Privacy laws such as Gramm-Leach-Bliley and SB 1386 merely specify what is expected of companies from a regulatory standpoint without explaining what they need to do from an implementation standpoint, Kenneally says.

"I see it as a combination of semantic differences between the legal and policy folks who write the laws and the techies who have to implement them. It becomes an issue of extrapolating technical solutions from abstract ideas and words," Kenneally says.

Examples of such vagueness abound. California's SB 1386 requires companies to "encrypt" data, but it doesn't specify the level of encryption required. Similarly, the law requires companies to inform customers of any "unauthorized access" to their data but doesn't define what constitutes unauthorized access.

As a result, companies may decide to "just do the very minimum and comply with the letter of the law, while in practicality [that doesn't] really provide the protection that the spirit of the law was meant to address," Kenneally says. "It is entirely conceivable that a civil or a criminal claim under SB 1386 could be raised if minimal, almost ineffectual measures are used."

SOBSTEP: The key, again, is to take the high road. The best way to demonstrate due diligence is to comply with the requirements of the most stringent law that's applicable to you, Kenneally advises.

POTHOLE:

Uncontrolled Partners

Programs for monitoring the privacy habits of your vendors, business partners and supply chain companies are also needed, says Herath. It's crucial to realize that a company owing the data is responsible for it even if a security breach is associated with a partner, he says.

"As we use more third parties, vetting them and the contracts they sign

becomes more important and more difficult," Herath says.

SOBSTEP: Nationwide has implemented a few third-party monitoring and compliance measures to address the problem.

All companies doing business with Nationwide have to fill in a Web-based self-assessment form that allows the insurer to quickly gauge the strength of its partners' privacy practices and sort them into separate risk categories. Depending on the sensitivity of the information being handled, Nationwide might ask a company to implement stronger privacy policies. Each company also needs to submit to regular privacy audits.

When it comes to partners that are based offshore, Nationwide has instituted "deeper due diligence and scrutiny," Herath says. This includes putting Nationwide's own security personnel at an offshore location to ensure that "people don't leave with things they are not supposed to leave with," he says.

This level of physical security is especially a concern at a time when technology has made it possible for users to store vast amounts of data as storage devices get smaller, Herath says. "A few years ago, you would need a truck to take it away. Today, all a user needs is a key fob," he says. ☐ 45091

THE POWER OF PRIVACY

Legal requirements and consumer concerns about their reputations are pushing the need to better privacy programs, says the author.

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The Mosaic Effect

DATA ELEMENTS that in isolation look relatively innocuous can amount to a privacy breach when combined, warns Elizabeth Borgus, privacy officer at the e-Government Office at the County of Santa Clara, Calif. In the intelligence community, that's known as the "mosaic effect" - when combinations of data inhibit produce a picture that wasn't apparent from the individual pieces.

As the delivery arm of a number of state and federal programs, the county collects and maintains an enormous amount of data on individuals, including

information about their medical and mental health histories, criminal records, demographic profiles and welfare benefits. "The kind of information we gather and maintain leads up to be especially concerned about privacy," says Satish Ajmani, the county's CIO.

To ensure better privacy protection, the county has launched a major data classification project. Its goal is to categorize and classify every bit of confidential information it manages in order to get a better handle on what's critical to privacy and what's not, Ajmani says.

- Jonathan Wray

KNOWLEDGE CENTER PRIVACY

COMPUTERWORLD March 15, 2004

requires input from business units as well as legal and compliance teams, says Herath, who manages 15 such notices for Columbus, Ohio-based Nationwide's business units.

POTHOLE: Far-flung Data

But it's not enough to say what you'll do. You also need to do what you say. And that means putting in place the technology and processes to monitor and ensure compliance with stated privacy policies, experts say.

"The biggest issue facing corporations with respect to privacy is establishing control over all privacy," says Arvid Nord, CEO of StrongAuth Inc., a Cupertino, Calif.-based identification management firm.

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THE ANNUAL COST OF PRIVACY PROGRAMS

Companies spend more on privacy activities as their programs mature.



BASE: Average direct and indirect costs of 44 U.S. small/midsize companies with more than 1,000 employees.

SOURCE: "THE COST OF PRIVACY: A SURVEY OF 44 U.S. SMALL/MIDSIZE COMPANIES," BY JEFFREY T. TIETZ, AKA, AND JEFFREY A. KENNEDY, AKA

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THE POWER OF PRIVACY

Legal requirements and corporate concerns about their reputations are pushing the need for holistic privacy programs, users say.

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—Johanna Vossjan



Losing Control

How do you protect sensitive data when it's in the hands of a third party? By Stacy Collett

A WOMAN IN PAKISTAN recently struck fear among IT executives who manage her source. She had obtained sensitive patient documents from the University of California, San Francisco, Medical Center through a medical transcription subcontractor that she worked for, and she threatened to post the files on the Internet unless she was paid more money.

The story didn't sit well with John Golden, CIO at CNA Financial Corp., a \$12.3-billion insurance company in Chicago that outsources a small portion of its billing functions to India. Golden's team implemented a slew of physical, technical and contractual security precautions to protect customer data, such as sending only necessary bits of customer information, backing up files in a centralized server at the home office and putting tough restrictions on employee turnover at the outsourcing facility. But there's always a horror story to make him wonder.

"I wish I could say we have the security issue licked," Golden says. "We haven't had any security breaches or our knowledge in this space" since CNA began outsourcing its billing

function a year ago. But with the growing number of sophisticated hackers, terrorist threats and old-fashioned opportunists, the threat of a security breach looms daily.

The outsourcing train has left the station with many top financial, health care, tax reporting and credit reporting companies on board. The business

process outsourcing market in India alone is expected to grow 54% to \$3.6 billion by the end of this quarter, according to the National Association of Software and Services Companies, a New Delhi-based organization made up of 800 Indian IT and outsourcing companies.

Industry observers warn that if outsourcing isn't done thoughtfully, with proper security controls beyond the encrypted domain level, companies will have their own horror stories to tell. Here are their tips on controlling data that's in the hands of a third party:

Ask to See a Security Audit

"If you're handling financial data or health data, you are required by law to have an information security plan that has administrative, technical and physical steps taken to safeguard the data—even less sensitive customer consumer data," says Becky Burr, an attorney and member of the International Association of Privacy Professionals in Philadelphia.

Though the requirement is broad and doesn't point to one particular standard, Kelly Kavanagh, an analyst at Gartner Inc., says outsourcing vendors should provide evidence that they have undergone a security audit by a reputable third party, such as a Big Four accounting firm.

Audits using standards provided by a government agency such as the National Institute of Standards and Technology or a Statement of Auditing Standards 70 form also provide protection. But many outsourcing firms balk at the high cost of those audits—some run to six figures—and choose less expensive documentation.

Some outsourcing vendors conduct audits against vertical industry standards. Health care companies should see an audit related to Health Insurance Portability and Accountability Act (HIPAA) regulations. CIOs in the financial services industry can look for audit guidelines under the Gramm-Leach-Bliley Act.

Set Up a Clean Room

Some facilities handling sensitive data require a clean-room environment to keep information from literally walking out the door.

Peter Bender-Samuel, CEO of The Everest Group, an outsourcing consulting firm in Dallas, describes a standard clean room: "All the machines and output devices except for terminals are disabled. You can't copy, can't use a hard drive or a PDA to get information out of there. Their servers reside back

in the U.S. So there's no way to get data out of there."

What's more, employees are physically searched when entering and leaving. "These are extraordinary precautions," says Bender-Samuel, and they might not be for every company.

Limit Access to Data

At CNA, all workers enter the centralized server through CNA's intranet, where they can also view links to CNA's methods and procedures and to the company's chat site. To handle its growing outsourcing needs, CNA in April will roll out a companywide portal that will restrict access based on user identity. A customized screen will pop up at the outsourcing facility with only a few options.

Once offshore workers have access to the server, CNA limits the amount of client information they can see. "If we're trying to verify that a customer is a good credit risk, we don't have to send all parts of the application, just [those] required to approve the application," Golden says.

Know Your Workers

No matter how many security precautions are taken, it's hard to stop the opportunist who steals data for money or revenge. James "Zeke" Zuccoli, CIO at LifeCare Management Services LLC, says the best way to keep his company's outsourced medical transcription records safe is to know the outsourcing workers and make sure they're trained properly about procedures and legal consequences.

"We do that through training, agreements and contracts," says Zuccoli. LifeCare, a Plano, Texas-based operator of 20 long-term-care hospitals in nine states, outsources 400,000 lines of medical transcription data each month to Affiliated Computer Services Inc. in Dallas. Transcriptionists have HIPAA training and know the rules and regulations required to maintain compliance with privacy standards.

Zuccoli and Golden also recommend sending people to visit outsourcing sites regularly to meet employees and monitor employee turnover and subcontracting activities. **EW4721**

Collett is a freelance writer in Chicago. Contact her at stcollett@aol.com.

PRIVACY PERILS

Outsourcing jobs to offshore destinations can sharply increase data privacy risks and the complexity of managing that risk, experts say.

QuickTake 44925
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How to Keep Data Safe

- **Check for outsourcing risks.**
 - Develop the outsourcing vendor to provide proof of a security audit by a reputable third party or industry group.
- **Conduct a security vulnerability assessment to determine what internal information you may receive from the outside.**
- **Provide only partial information about a customer—and the full profits.**
- **Put outsourcing deals into the contract.**
 - Make sure the contract includes a ban on employee turnover at the outsourcing site.
- **Ask the outsourcing vendor to provide a paperless data-entry environment.**
- **Keep the outsourced database at your home site, not overseas.**

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CPOs: Hot or Not?

All the rage in the boom years, chief privacy officers lost traction with the downturn. New privacy regulations are restoring their clout. By Steve Ulfelder

IN 1999 AND 2000, a new title made its way into many executive suites: chief privacy officer. Reaction was mixed. Some CIOs and analysts welcomed the concept of a corporate privacy czar, while skeptics viewed the CPO boomlet as public relations gloss whose sole function was to assuage consumers' privacy fears.

The economic downturn of 2000-03 brought the CPO trend to an inglorious halt. "Over the last few years, the economy made it hard to bring in people except in industries where CPOs were mandated," says Herman Collins, CEO of Privacy Leaders, a Las

Vegas-based executive search firm that focuses on privacy professionals.

But the world has turned. The economy is percolating, hiring bans are easing — and U.S. companies face an imposing array of privacy-related regulations, including the Health Insurance Portability and Accountability Act (HIPAA) and the Gramm-Leach-Bliley Act. Against this changing backdrop, it's time to check in on the status of CPOs.

Regulatory Surprise

According to corporate privacy experts, federal regulations such as HIPAA, the Sarbanes-Oxley Act, the Fair Credit Reporting Act and Gramm-Leach-Bliley are affecting enterprises in significant, but perhaps counterintuitive, ways. Far from creating a second CPO boom, these regulations may actually be splitting privacy measures between two camps.

■ Those in the "CPO Classic" camp advocate hiring genuine corporate officers charged with proactively considering the ethical, competitive and strategic implications of privacy.

■ The "Compliance Is King" camp is narrowly focused on meeting the letter of the various federal, industry and state privacy regulations.

There is widespread agreement, especially among disappointed CPO Classic advocates, that the explosion of privacy regulations, combined with limited resources, has produced heavy emphasis on compliance. "Most companies have shifted from a privacy approach that would be based on proactive steps, competitive-edge orientation and customer trust building to a narrow legal-compliance priority," says Alan F. Westin, president of the Hackensack, NJ-based nonprofit organization Privacy & American Business.

"This shifts power to the legal folks... and away from CPOs, and it also leads companies to spend tight dollars on outside legal counsel, again, for narrow law compliance."

Richary Purcell, CEO of Corporate Privacy Group, a Seattle consulting firm, agrees. Purcell pushed for creation of the CPO position at Microsoft Corp. and served as that vendor's first CPO from 2000 until early 2003.

"Unfortunately, the response to [regulations like] HIPAA has been to make privacy officer a compliance job, not proactive or strategic," Purcell says. "I'd argue that that's in conflict with the initial focus, which was more entrepreneurial."

A perfect example of compliance-driven privacy measures is the HIPAA mandate that any health-care-related business name a privacy officer. That includes major hospital chains, but also "a seven-person dental office," Purcell says. Thus the roster of CPOs is growing (see chart), but it's hard to see how the new title — which is thousands of small medical offices is likely to be awarded to an already overworked assistant — will advance the cause.

Membership in the leading CPO group, the Philadelphia-based International Association of Privacy Professionals, is about 1,000. Because of mergers

among privacy groups, apples-to-apples comparisons are difficult to come by, but Westin says the growth in strategic CPOs plateaued in 2003; he believes that there are about 3,000 CPOs in the U.S. but that most of those are soaps to HIPAA compliance.

Still, the CPO field isn't without heavy hitters: Privacy Leadership Group, part of Privacy & American Business, is composed of 16 CPO Classics — Westin calls them "strategically oriented CPOs" — from organizations such as Citigroup Inc., American Express Co., Bank of America Corp., the U.S. Postal Service, Nationwide Mutual Insurance Co., Equifax Inc., Hewlett-Packard Co. and Microsoft. Nearly all of these enterprises have had CPOs since 2001.

Clout Is Critical

In the Information Age, it seems clear that the relationship between a CPO and his employer's IT organization is critical. The Ponemon Institute LLC, a Tucson, Ariz., think tank focused on corporate privacy issues, recently surveyed 64 companies that have

CPOs. According to institute Chairman Larry Ponemon, companies whose "CPO has at least a dotted-line relationship to the CIO tend to have more effective privacy programs."

The key reason, Ponemon adds, is that privacy is so tied into IT functions that even the best privacy policies are fruitless unless they can be implemented — reliably and repeatedly — by the IT group. Indeed, Westin says, "Many of the hard issues facing companies are shifting also to CIOs. Their systems must track opt, do-not-call lists, etc., and must try to develop more secure customer and consumer identification — especially to control ID theft."

Former CPOs and privacy experts say this relationship varies widely from company to company, relying almost totally on the CPO's background and personality.

"I'd call those relationships 'intensely variable,'" says former Microsoft CPO Purcell. "People in IT have titles and credentials that are promiscuous... They often have a hard time with a privacy person because there's no objective credentials. A CPO could be from legal, compliance, HR, anything." Partly because of this disconnect, many CIOs are unsure of their role, "unless a smart CPO creates a working committee that brings the CIO into a privacy task force," Westin says.

One thing seems clear: As Westin says, regardless of the future of the CPO, "in smart companies, CIOs are front and center" where privacy is concerned.

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Ulfelder is a Computerworld contributing writer in Southboro, Mass. Contact him at ulfelder@charter.net.

CPOs AND PRIVACY

Privacy and regulatory issues are landing on the chief security officer's plate. But is there too many functions to handle on one position?

QuickLink 43359
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CPOs on the Rise?

LAST YEAR, 67 OF 101 privacy officers offered the first meeting of the International Association of Corporate Privacy Officers.

2003: At least 100 headless business employ CPOs, according to Alan F. Westin, president of nonprofit Privacy & American Business.

2004: The new largest CPO organizations expect to join the International Association of Privacy Professionals, which claims membership of more than 1,000.

2004: Westin estimates the number of U.S. CPOs at 3,000 but says most are narrowly focused on compliance issues.



INFORMATION LIFECYCLE MANAGEMENT IS:
a strategy that uses people, processes and technology to store and tap critical business data throughout its lifespan of value.

IN THIS EDITION:
See how companies are turning their new regulatory challenges into business opportunities by leveraging the benefits of Information Lifecycle Management.

Information Lifecycle Management: The Smart Way to Save Money

CERTAINLY, SMART COMPANIES recognize that information is the linchpin of their success. In most organizations, corporate information is their most valuable asset, the key ingredient with which innovative new business models are built.

"The ability to use and leverage information as a company to drive additional business is critical," says Mark Lewis, chief technology officer at EMC in Hopkinton, Mass. "For many companies, smart use of information has truly become a differentiator, particularly as technology provides companywide access."

But if innovative information management is the ultimate goal, then the immovable object squarely in its path

is the reality of today's lean IT budgets. Technology is the vital framework on which companies rely to help business information flow freely, but many worthy efforts have been hamstrung by the flat or declining budgets of the past several years.

Yet limited resources are no excuse for limited action, says Chuck Hollis, vice president of platforms marketing at EMC. "More and more companies are realizing that information is money, and they have to do a better job of managing their money," he says. "But all this is happening as IT budgets are flat and labor costs are growing."

Spurred by boardroom-level concerns about the escalating costs of

"Our business was able to cut support staffing by 30 percent, yet increase its throughput by 20 percent. [ILM] had a significant bottom line impact and a net delta of somewhere around 10 percent in our profitability, directly attributable to this planned technology."

—Bob Terleman,
Rouge Information
Technology

technology, IT executives have embarked on a constant search to make their infrastructure as streamlined and cost-efficient as possible.

Many have already implemented measures that address cost-cutting on a piecemeal basis—server consolidation or outsourcing, for example—but also need a method of reducing infrastructure and information management costs enterprise-wide. One intriguing answer: Information Lifecycle Management (ILM), which offers an opportunity to streamline infrastructure costs across the board by tying the business value of information to the cost of managing it.

"If you think of information as assets, Information Lifecycle Management is the alignment between the value of information and how much a company is spending to make it available to people," says Hollis.

Information Lifecycle Management can help streamline operational costs. New York's Rogers Medical Intelligence Solutions has recognized significant cost savings through Information Lifecycle Management, according to Robert Terleman, the company's vice president and chief information architect. "One of the key results is that our business was able to cut support staffing by 30 percent yet increase its throughput by 20 percent," says Terleman. "It had a significant bottom line impact and a net delta of somewhere around 10 percent in our profitability, directly attributable to this planned technology."

TECHNOLOGY OPERATIONAL EFFICIENCY: BUSINESS DRIVERS

Much has changed over the past several years for companies that rely on online information for strategic value. Consider:

Budget Constraints. While CIO magazine's latest quarterly Tech Poll forecasts a modest increase in IT budgets for 2004, caution is still the watchword. Nearly one-third of survey respondents say that ongoing financial constraints affect IT spending, while nearly 60 percent say that spending

OPERATIONAL EFFICIENCY: BUSINESS DRIVERS

- Budget Constraints
- Explosive Information Growth
- Manual Processes
- Fragmented Management Strategies
- Regulatory Compliance Issues

on computer hardware will remain flat or decrease.

Explosive Information Growth. Companies are squandering away unprecedented quantities of data in many forms—the structured information that lies in databases as well as the unstructured, file-based information that lies in Word and Excel documents across a network.

"Information is growing at a ridiculous rate," says Steve Kenniston, a technology analyst at Enterprise Storage Group, a research company based in Milford, Mass. "Where there used to be one storage administrator for one terabyte of data, now they need nine administrators to manage six terabytes, and soon it'll be one for every 14 terabytes. For that to happen, companies need to make information management more efficient."

Manual Processes. "Categorizing, moving and disposition of data is still a very manual process at most companies," says Hollis. "Tools are few and fragmented, and a far cry from the automated determination of policy." Worse, manual information management consumes staff time—and as Hollis points out, "Labor is the most expensive component of IT today."

Fragmented Management Strategies. Gaining a bird's-eye view of all that information is no small task. Without a comprehensive strategy, it's difficult for companies to manage the data that's spread across an entire enterprise.

Regulatory Compliance Issues. New regulations and corporate governance mandates for the storage and management of information mean that companies must

be able to retrieve data quickly and on demand. Faced with the difficult and time-consuming task of accessing data that may well be spread across a variety of sources—or that may have been deleted—it's small wonder that companies can be frightened into taking a "save it all" approach.

These issues are prompting CIOs to recognize that the real opportunity to drive big costs out of IT is to look across the entire lifecycle of the information and the infrastructures that support it. In short, Information Lifecycle Management.

As detailed in earlier parts of this series, Information Lifecycle Management is not a product but rather a method of harnessing informational chaos. "[ILM] is a strategy, and one that encompasses people, processes and technology," says Keniston. Done right, ILM is proactive and dynamic, and

INFORMATION LIFECYCLE MANAGEMENT ENABLES OPERATIONAL EFFICIENCY

- Improve Classification
- Leverage Existing Assets
- Enable Policy Automation
- Tier Storage
- Decrease Compliance Costs
- Stretch IT Resources

helps companies plan IT growth to meet their anticipated business needs. "[Information Lifecycle Management] is the ability to provide companies with access to information—the right information—and the most up-to-date and logical version across the enterprise," says Tanuja Randery, vice president for global strategic initiatives at EMC. "If companies want to access and use information to their business advantage, ILM enables this by providing a unified approach to viewing and access while ensuring that the cost and performance of the infrastructure is optimized."

LINKING INFORMATION LIFECYCLE MANAGEMENT AND OPERATIONAL EFFICIENCY

Implementing Information Lifecycle Management can help companies manage information both more wisely and less expensively. By building an information management strategy based on this discipline, companies can build cost savings into their infrastructure in a holistic fashion. Information Lifecycle Management Helps:

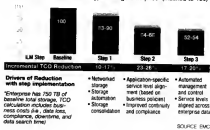
- **Improve Classification.** Many companies don't even know what they have for equipment. Information Lifecycle Management, which starts with a thorough inventory of physical and informational assets, ensures that companies know exactly what they have, which helps them make better-informed spending decisions. By conducting a data classification and prioritization study, companies can ensure that data is placed on the level of storage most appropriate to its business value. Many times, that means calling in outside experts. "Information Lifecycle Management consultants are part of the storage companies' bench teams," says Pete Gerr, an analyst at Enterprise Storage Group. "They have the services and tools that will help an organization classify and value their data, taking a step toward having a fully realized strategy."
- **Leverage Existing Assets.** Once companies know exactly what's there, they can better prioritize information assets in accordance with information management policies. "If you know up front what you have and how much data is being created, you'll do better capacity planning," says Keniston.
- **Enable Policy Automations.** The ability to simplify and automate technical infrastructure through Information Lifecycle Management means that companies can lower business costs and hire fewer people. "You get efficiencies by automating the things that people have to do today," Hollis explains. By creating and then automating policies

"Information is growing at a ridiculous rate. Where there used to be one storage administrator for one terabyte of data, now they need one administrator to manage six terabytes, and soon it'll be one for every 14 terabytes. For that to happen, companies need to make information management more efficient."

OPERATIONAL
EFFICIENCY

IMPACT OF ILM AND TCO SAVINGS ACROSS STAGES

Three-Year TCO Estimate for Typical Large Enterprise* (Indexed to 100)

QUESTIONS ABOUT
INFORMATION
LIFECYCLE
MANAGEMENT?

If you've got any burning

questions about

Information Lifecycle

Management—and how

you can begin

implementing such a

strategy—send them to

info_questions@emc.com.

We'll answer the most

frequently asked

questions later in

this series.

to drive information management, companies can streamline operations and cut costs. "The principal savings is around the dynamic movement of data," says EMC's Lewis. "The value of data changes over time, and ILM helps flexibly move data to the appropriate level of storage as its business value changes."

• **Tier Storage.** Classifying data enables IS executives to create tiered storage that matches the business value of the data with the corresponding price/performance layer of storage. For example, mission-critical applications might reside on high-performance disks, while important but less critical data land on less costly ATA disks. "Having high-end, mid-tier and archive storage makes a lot of sense financially and from a recoverability standpoint," says Kenniston. "By migrating the lower class of information to a second tier of storage, companies save money but also keep it available and protect it more easily." As the range of options in tiered storage increases, so do the effective business continuity options for the corporate world.

• **Decrease Compliance Costs.** Information Lifecycle Management handles data according to its business value at a very granular level, so CIOs know what data should be kept and what can be deleted,

thus saving money. It also makes compliance much simpler, so companies are less likely to incur compliance-related expenses such as legal fees or staffing costs.

• **Stretch IT Resources.** Automating information management in accordance with data policies means that CIOs will be able to redeploy existing staffers to other projects, making their resources go further for the same money. "If companies can automate the process and take the human aspect out of it, it saves them money," says Kenniston. "Once CIOs are convinced that storage can be automatically moved to the right asset when they want to move it, automation is the next step."

In an era of increasing concern over the cost of technology, CIOs see the wisdom of embracing budget reduction strategies that add value as well as cut costs. One important step is to implement a strategy that works across the entire company to manage information holistically.

"By implementing Information Lifecycle Management, we believe that CIOs can expect to see a net of up to 50 percent actual cost savings in overall storage costs," says EMC's Lewis. Companies can make sure that they drive all possible extra costs out of managing and storing information—and at the same time, truly give business leaders what they need to thrive.

"If you recognize that information is a core company asset similar to physical plant and human resources, then you really understand the value of an integrated storage solution," says Terdemian. "Because what you're really storing are critical company assets in a managed and efficient way."

NEXT: In the next part of this series, we'll look at Information Lifecycle Management for small to medium-sized enterprises (SMEs).

EMC FOR MORE INFORMATION
Visit www.emc.com/ilm
for an in-depth look at Information Lifecycle
Management products, services and strategies.

Privacy Glossary

BY RUSSELL KAY

TO HELP the reader sort through the barrage of terms thrown around in the privacy debate, here's a glossary that we've divided into two sections: commonly understood notions, and related technological terms.

Notions of Privacy

Within the context of the Internet, the right to privacy is still being defined. Generally, it involves a person's right to control what information about himself is revealed and to whom, as well as what others may do with that information. It's not the same thing as secrecy, but the distinction is sometimes murky. Privacy isn't an absolute right, since it's often trumped by laws and overriding social needs. For example, law enforcement officials may obtain warrants that allow them to intercept communications or search physical areas, activities that otherwise would be forbidden.

ANONYMITY There are times when we're willing to supply personal information, provided it's not connected directly to us. When we respond to a survey, for example, we may feel comfortable about revealing personal information, such as income and lifestyle choices, because we believe that our answers won't be linked in any way to our names or other identifying information. And there are other times when anonymity can be desirable—for example when reporting a crime.

Online, we can use an Internet site called a remailer that reposts a message from the site's own address, thus concealing the originator of the message. However, remailers have a tarnished image, since many spam distributors also use remailers. (See also anonymizer, below.)

CONFIDENTIALITY Despite the absence of legal consequences, most of us expect to be able to hold at least some personal information in confidence, and if we give that information to

someone—such as when filling out a loan or employment application—we expect the other party to take security measures to protect that information and not to share it with others.

PRIVACY IN THE LAW The Privacy Act of 1974 asserts that an agency of the U.S. government must not conceal the existence of any personal data record-keeping system, and each agency that maintains such a system must describe publicly both the kinds of information in it and the manner in which it will be used. The law defines eight principles on which to base and enforce privacy policy: openness, individual access, individual participation, collection limitation, use limitation, disclosure limitation, information management and accountability.

PSUEDONYMITY This concept originated in the field of cryptography. Pseudonymity is the ability to prove a consistent identity without revealing one's actual name, instead using an alias or pseudonym. Pseudonymity combines many

of the advantages of both a known identity and anonymity. In anonymity, one's identity isn't known, but pseudonymity creates a separate, persistent "virtual" identity that can't be linked to a specific person, group or organization. Pseudonymous remailers, called "nym servers," take messages addressed to the pseudonym and resend them to the pseudonym's real e-mail address, and they can also forward messages to others as though they came from the pseudonym's address on the server. And unlike with anonymity, users can reply to a pseudonymous sender, and pseudonyms can establish reputations in the digital world.

Privacy-related Terms

ANONYMIZER Sometimes called a Web anonymizer, this privacy service lets a user visit Web sites while preventing those sites from gathering information about the user (including IP address, browser and operating system identification, and cookie-stored data) or which sites he has visited. Anonymizers usually work by using a proxy server to process HTTP

requests. When the user clicks on a hyperlink or types a URL, the anonymizing server intervenes and gets the information for the user. The Web site whose page is being requested gets only information about the anonymizer server, not the user's computer. An anonymizer makes a user feel that his privacy is better protected on the Internet, but it also prevents personalization, so sites can't tailor their content to suit the user, and he may have to re-enter personal identification repeatedly (such as when making purchases).

OPT-IN/OPT-OUT An important distinction in the privacy debate concerns the terms under which e-mail marketers (legitimate ones, not spammers that ignore ethical and legal concerns) can contact users. Opt-in is the consumer-friendly position, where companies can send e-mail only to people who have directly given their consent for such communications, typically by signing up at a Web site. Opt-out is the marketer-preferred alternative under which marketers can e-mail to anyone who hasn't specifically told them not to. Unfortunately, spammers have used opt-out replies as a way of verifying valid e-mail addresses.

The Internet Direct Marketing Bureau has endorsed opt-in as the best practice for its marketer members.

PRIVACY POLICY Most Web pages have a page describing in detail the site's privacy practices and what the site's owners will do with any information they collect.

P3P Short ("Platform for Privacy Preferences Project," this is a standard XML format adopted by the World Wide Web Consortium for Web sites to use to encode their privacy policies [see QuickLink 33484]. P3P recommends practices

that will let users define and share personal information with Web sites that they agree to share it with. Using software that adheres to the P3P recommendations, users can create a personal profile and make it (or parts of it) accessible to a Web site as the user directs.

RFD Now on the verge of becoming a widespread supply chain tool, radio frequency identification tags are getting smaller and cheaper, and privacy concerns are being raised. It may not be long before such tags are built into individual items (such as clothing), not just shipping pallets, allowing an unprecedented amount of automated monitoring of people's habits, behaviors and locations.

SPYWARE Any technology that aids in gathering information about persons or organizations without their knowledge. On the Internet, spyware is program code that's secretly installed in a computer to gather information about the user and relay it to advertisers or other interested parties. Spyware can infiltrate a computer as a virus or as a surprise result of installing a new program. Data-collecting programs installed with the user's knowledge aren't spyware as long as the user fully understands what data is being collected and with whom it will be shared. If your computer has spyware in it, be aware that you have a "live" server sending information about your surfing habits to a remote location. **Q4594**

Kay is a Computerworld contributing writer in Worcester, Mass. Contact him at ruskay@charter.net.

PRIVACY RESOURCES

For a listing of more sources of information and links to online resources, see

[QuickLink 4591](http://www.computerworld.com/QuickLink_4591)
www.computerworld.com

Are these technologies in issue you're likely to learn about in QuickStudy? Scan your eyes to quickstudy@computerworld.com

To find a complete archive of our QuickStudies, go online to www.computerworld.com/quickstudies

QUICK STUDY

WEB BEACONS

Also called Web bugs, pixel tags or clear GIFs, these file objects (typically a single transparent pixel invisible to the user) are used along with cookies to help track the behavior of Web site visitors. Users can set their browsers to accept or decline a cookie, but a Web bug always arrives; it's just another graphic on the page. Turning off cookies will prevent tracking your specific activity, but

the Web beacon can still record an anonymous visit through your IP address. Web beacons are typically used by a third party to control advertising from a number of different sites. Web bugs can be put to positive use, such as to track copyright violations on the Web.



The Almanac

An eclectic collection of research and resources. By Mitch Betts



Camera phones threaten corporate privacy threat?

Camera Phones

Today's camera phones could be used for corporate espionage or privacy violations. Here are Gartner Inc.'s recommendations for a corporate policy:

- 1 Establish a clear policy but not an outright ban.
- 2 Create clearly marked secure zones, where all photography is forbidden.
- 3 Ban photography of items that are confidential to the company.
- 4 Prohibit taking pictures of other people without their permission.
- 5 Insist that no photographs be taken in places where personal privacy is expected.

Research Roundup

■ Among federal government agencies, the U.S. Postal Service gets the highest "privacy trust score" from the general public, according to a study by Ponemon Institute LLC and the CIO Institute. The CIA and the Department

of Justice got low marks in the survey of 6,000 Americans.

■ "Current IP telephony products and implementations demonstrate an alarming lack of protective security measures, leaving the enterprise open to privacy violation, fraud and malicious attacks," warns Meta Group Inc. ■ In a survey of 948 people who were recently hospitalized, 63% of the respondents said they support the idea of having a complete, computerized medical record that could be accessed anywhere in the hospital. But 58% said they're concerned about the privacy of their records. The survey was commissioned by Siemens Medical Solutions in Malvern, Pa.

Bell Labs Software Hides Wireless Users

People who don't want their wireless carriers to keep track of their whereabouts and send unsolicited messages can gain greater control over their privacy with new software from Bell Labs. The technology allows mobile phone users to specify what location information they wish to share, when, with whom and under what criteria, according to researchers at Bell Labs, a division of Lucent Technologies Inc.

Many European and U.S. carriers already offer a range of location-based services, enabling them to track customers and send them relevant local information about, say, restaurants, movie theaters and retail stores. While some users appreciate such services, others prefer not to expose themselves to constant surveillance.

The Bell Labs system is analogous to querying a database. The request is checked against the user's preferences and filtered through a rules engine, known internally at Bell Labs as "Houdini," before action is taken. This entire process takes only a few milliseconds. The technology could appeal to users in the corporate sector, researchers say. Equipment vendors, for instance, may want to know the loca-

tion of their technicians during regular working hours, but in the evening, the technicians may prefer to disable location-sharing with their bosses.

— John Biss, IDG News Service

FTC Nets Penalties For COPPA Charges

The U.S. Federal Trade Commission recently settled with two Web site operators charged with violating the Children's Online Privacy Protection Act (COPPA), netting the agency's largest civil penalty yet under the law.

Bonzi Software Inc. and UMG Recordings Inc. were accused of collecting personal information from children online without their parents' consent and settled for penalties of \$75,000 and \$400,000, respectively. Santa Monica, Calif.-based UMG Recordings operates music-related Web sites and was charged with collecting birth-date information from

children through its online registration process, the FTC said.

San Luis Obispo, Calif.-based Bonzi Software, which distributes a free software download called BonziBuddy, was the first company charged for privacy violations over a download, the FTC said. — Scarlet Pruitt, IDG News Service ■ 45098

Conferences

Computers, Freedom and Privacy Conference
April 20-23, Berkeley, Calif.
<http://cfp2004.org>

IT Compliance World
May 17-19, Boston
<http://itcworld.com/conference>

National Global HR Privacy Conference
May 20-27, Washington
www.naphc.org

Privacy & American Business Annual National Conference
June 22-24, Washington
www.parcab.org

MORE RESOURCES

Get privacy news, columns and resources at our online Privacy Center

QuickLink #12900
www.computerworld.com

Privacy Policy Road Map

Here's a guide to crafting a privacy policy as the first step an enterprise privacy management. Remember, a privacy policy is no good if customers don't know about it, employees can't implement it and the company doesn't enforce it.

ILLUSTRATION BY LINDA STONE, JUNE 2003



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Storage Networking World's multi-vendor Interoperability & Solutions Demo, taking place at the twice-yearly Storage Networking World conference, April 5-8, 2004 in Phoenix, gives you a complete view of interoperability in a collaborative and vendor-neutral setting. Whatever your needs - whether it's managing more storage with fewer resources, looking for infrastructure needs to support disaster recovery strategies, or wondering if you are ready for SCSI and SMP-S - this is the world's best place to see feature sets, supported solutions and interoperability.

To register to attend Storage Networking World and see the Interoperability & Solutions Demo, visit www.snwusa.com

Companies planning to participate at the Spring 2004 Interoperability & Solutions Demo include (as of 3/1/04):



SNAPSHOTS

Cost of Privacy

Setting up a privacy program office is the costliest part of privacy efforts at major corporations. Here are the most expensive parts of that cost center:

- 1 Salaries of privacy and data protection staff
- 2 Travel expenses for meetings
- 3 Outside consultants
- 4 Professional associations
- 5 Specialized education and training

SOURCE: IDC

Making the Grade

A consumer group recently issued a report card on the financial privacy practices of 55 California financial services companies.

The following got the top grades:

- A+** Pacifi Life Insurance Co
Sea One Credit Union
- A** E Loan Inc.
- A-** U.S. Bank
First Republic Bank
State Farm Insurance Co
21st Century Insurance Group
Fidelity's Fund Insurance Co

Most Trusted

A ranking of the industries that consumers trust most to protect personal information:

- 1 Hospitals, clinics
- 2 Pharmacies
- 3 Banks
- 4 Churches, religious groups
- 5 Airlines
- 6 Car rental companies
- 7 Utilities

SOURCE: PIR

JAY CLINE

The RFID Privacy Scare Is Overblown

THE PRIVACY SCARE surrounding radio frequency identification tags is greatly overblown. No company or government agency will be secretly scanning your house to find out what products you've purchased, because there's no feasible way to do so. But if RFID chip makers don't soon allay these fears, the escalating public emotion about this issue may effectively ban the most valuable implementations of this remarkable technology.

Hospitals imagine a day when RFID tags will help prevent medical errors by transmitting the correct medicine dosages to nurses. Appliance makers and food producers envision faster and more targeted recalls of defective products. Clothing and shoe stores expect RFID tags to help identify items of the right sizes for customers, enabling faster service. Clothing makers hope the tags will be able to tell washing machines how to best wash items.

Sound too good to be true? Wal-Mart and the Pentagon don't think so. They're counting on RFID tagging to bring them savings of several billion dollars from lower inventory management costs. Items will no longer need to be individually hand-scanned, thus expediting product loading, invoicing and customer checkout. Scanners might be placed on shelves to speed restocking and installed at building exits to prevent theft. These lucrative benefits prompted both organizations to mandate that their suppliers tag cases and pallets with RFID chips by January 2005.

So what's the problem? Privacy advocates are concerned about tags on products continuing to emit signals in the parking lot, on the road and at home. They're worried that using charge cards or loyalty cards during checkout could result in customer identities being written to the tags. In the worst scenario, they imagine stalkers and thieves scanning cars and homes for expensive goods and personal information.

Some companies are already experiencing a customer backlash with their product-level tagging trials. Shoppers at a New York clothing store recently complained about the prospect of their clothing sizes being beamed into the air. Wal-Mart reportedly had to cancel a pilot where it tagged packages of high-end razor blades because of negative consumer feedback.

Stories of people being tagged have only heightened worldwide fears of Big Brother. In Mexico, some children have reportedly had RFID chips implanted under their skin so they can be tracked if they're kidnapped. A company in Brazil has supposedly embedded chips

into employees' skin to control their access to buildings. A school in Buffalo, N.Y., requires students to wear RFID-tagged badges to track arrival times. Some have speculated on the benefits of using implanted RFID chips to store patients' medical and criminal histories. Wish friends like these: does Wal-Mart need enemies?

The RFID hype has certainly outpaced reality. Manufacturers and retailers have yet to agree on a universal electronic product code. RFID scanning is also far from error-free. But more important, RFID signals are so weak that they're easily blocked by metals and dense liquids. It's infeasible today for someone driving a vehicle down your street to intercept signals from RFID-tagged goods inside your home.

The economics of RFID chips also limit how they're used. Until the price of RFID chips comes down to about a penny apiece, they'll mostly be used at the case and pallet level, clear of any personally identifiable activity. So we have several years to identify the privacy controls we want to see in RFID systems.

Some companies are already creating these privacy controls. Chip makers and users are discussing how the principles of data privacy could be built into the RFID process. A top priority is notifying customers that certain items are tagged with these transmitters—which could be done by placing a common RFID logo on product packages. To give customers the ability to turn off the transmitters, some companies plan to make them peel-off. RSA Security Inc. is also developing a chip that could be worn on watches or bags to block nearby RFIDs from transmitting certain information. So the RFID privacy ball is rolling.

But the gathering storm against RFID tags may soon outpace these positive efforts and make product-level RFID tagging taboo. RFID makers and users should take a time-out from their technical discussions and start talking more with the public about what's going on. Their dreams of big economic returns may well depend on it. **© 44785**



JAY CLINE
MANAGES THE PRIVACY
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- 4. Professional associations
- 5. Operational education and training

SOURCE: EFFIS, based on national companies
SOURCE: THE COST OF PRIVACY STUDY, NEW AND FORWARDED INDUSTRIES LLC, TUCSON, ARIZ.
 FEBRUARY 2004

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21st Century Insurance Group
Fremont's Fund Insurance Co.

SOURCE: CONSUMER & FIDUCIARY OF CALIFORNIA, NOVEMBER 2003, CALIF. CREDIT UNION

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A ranking of the industries that consumers trust most to protect personal information:

- 1. Hospitals, clinics
- 2. Physicians
- 3. Banks
- 4. Churches, religious groups
- 5. Airlines
- 6. Car rental companies
- 7. Utilities

SOURCE: Survey of 1,000 U.S. consumers
SOURCE: PIONEER MONITORING, L.L.C. AND
 PIONEER INC., SAN FRANCISCO, NOVEMBER 2003

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NOTICE OF SALE OF ASSETS AND OPPORTUNITY TO BID

PLEASE TAKE NOTICE that Philip V. Martino, chapter 7 trustee for the bankruptcy estate of **Xentex Technologies, Inc.**, will (himself or through proxy) conduct a public auction on **April 14, 2004, at 1:00 p.m.** at the United States Bankruptcy Court for the Northern District of Illinois, Dirksen Federal Building, 219 South Dearborn Street, Courtroom 680, Room 610, Chicago, Illinois, of the bankruptcy estate's intellectual property described below and an automobile pursuant to bidding procedures that the bankruptcy court has approved.

"Intellectual Property" includes, but is not limited to, Xentex's patents (including, but not limited to, US Patent no. 6,081,207; US Patent no. 5,949,643; US Patent application serial no. 09/690,799; Chinese patent application serial no. 99816492.5; Taiwan patent application serial no. 088109026); and the following, whether or not they be in the Trustee's possession: Xentex's trademarks or service marks and the good will appurtenant thereto; Xentex's copyrights and works of authorship; Xentex's drawings; Xentex's laboratory books; all of Xentex's originally-authored, solely owned or duly licensed software (subject to the terms of applicable license agreements, if any); Xentex's object codes, source codes and hardware related to any of Xentex's actual or proposed products; Xentex's blueprints; Xentex's customer and supplier lists; Xentex's computers, floppy disks, hard drives, cd roms or dvds; or any paper or electronic document related thereto and other intellectual property of every sort and description.

"Automobile": Xentex's 2000 Jeep Grand Cherokee.

To qualify to participate in the auction, any party bidding must deliver to the Trustee's counsel at or before the auction, among other things, an advance cash earnest money deposit of \$12,500 for the Intellectual Property and \$1,400 for the Automobile, both in the form a cashier's check or certified check. A complete copy of the bidding procedures is available upon request by contacting the undersigned the Trustee's counsel. The Trustee will seek approval of the results of the auction before the Honorable John H. Squires, United States Bankruptcy Judge, on **April 15, 2004 at 9:30 a.m.** at the United States Bankruptcy Court for the Northern District of Illinois, Dirksen Federal Building, 219 South Dearborn Street, Courtroom 680, Chicago, Illinois.

For a complete set of bidding procedures, please contact the Trustee's attorney, Colleen E. McManus, **PIPER RUDNICK LLP**, 203 North LaSalle Street, Suite 1800, Chicago, Illinois 60601-1293, phone: (312) 368-7027, or email colleen.mcmanus@piperrudnick.com.

100 jobs posted The corporation is looking for information technology experts to help them push forward their strategy of personal investment consulting. Jobs ranging from business analysts to programmers to application developers are posted, along with a plum job as vice president of Schwab Investment Management Technology.

The Charles Schwab story is reiterated across the sector. The American Bankers Association's community banking division lists information technology officers as one of the top three most difficult slots to fill, alongside compliance and trust officers. According to Heather McElrath, ABA spokeswoman, community banks are expanding physically with new branches and need to continuously upgrade their online banking capability for customers who want 24 hour per day service. Both require complex IT systems in a niche of financial services that has been slowly building capability over the past four years.

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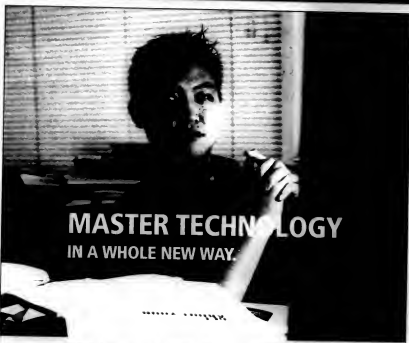
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References

1. The B2B Server Database: A Comprehensive Shopping Guide, and Marketing Sales Technology and Marketing Sales Service.
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ISPs' Spam Fight

CALL IT THE REVOLT of the ISPs. Last week, the four biggest U.S. Internet service providers — America Online, EarthLink, Microsoft and Yahoo — filed six lawsuits against high-volume spammers. The lawsuits target several big-time spammers by name, along with hundreds of "John Does" — that is, spammers to be named later. Meanwhile, news also surfaced that broadband provider Comcast has been cutting off Internet service for some customers whose computers are being used to relay spam messages.

What gives here? Has the whole ISP world suddenly gone sane?

OK, let's be fair: This surge of antispam sanity isn't that sudden. Some big ISPs have been filtering out spam for years, using tools such as the Realtime Blackhole List of spam sources maintained by Mail Abuse Prevention System LLC. In fact, for some ISPs, spam prevention has become a selling point.

And it's not out of altruism or good citizenship. Spam costs ISPs bandwidth, which translates into money. And the ISPs' users hate spam, so less spam means happier customers.

But last week's round of lawsuits clearly kicks the ISPs' antispam efforts up a notch. Who'd have thought the tortuously named CAN-SPAM law (for "Controlling the Assault of Non-Solicited Pornography and Marketing"), which went live in January, would be more than wishful thinking for dealing with spam?

Even more noteworthy is Comcast's decision to pull the plug on customers whose PCs have been turned into spam zombies. Unlike the spammer-suing ISPs, Comcast is shutting down its own customers and risking their wrath.

But huge numbers of Comcast's cable broadband customers are naive home users with no firewalls or virus protection, whose PCs are continuously connected to the Internet, making them prime targets for worms that will use them to relay spam. Going after its customers may be the only way for Comcast to protect its network.

If Comcast spots signs that a customer's PC is pumping out spam, Comcast issues a warning. If the customer doesn't clean up the problem, Comcast cuts off service.

For corporate IT shops struggling against a constant flood of spam — much of it generated by broadband-connected home users — that's

good news. Except that it's had news, too.

Why? Because some of the users cut off by Comcast — and other broadband providers, if they follow suit — are likely to be our users.

You know the ones. They turn off antivirus software, circumvent firewalls and work around security procedures. They're security disasters looking for a place to happen. At work, we protect them from themselves. At home, we can't, and they're bound to get into trouble.

But when hapless executives and other employees discover they can no longer use the Internet to work from home because their broadband providers have cut them off, our help desks will still have to field the calls and clean up the mess.

That means we'd better get ready. And we can start by spelling out for our users just what might happen.

We can explain that broadband providers are getting serious — even heavy-handed — about dealing with customers whose PCs are infected with spam-generating worms. We can warn that their broadband service might be cut off if they don't have antivirus and firewall software.

And we can tell our users what to do if their broadband providers warn them about being spam relays. We can help clean up the problem so they'll stay connected — but only if they act immediately when they get a warning. If they wait until their service is cut off, it'll be harder to straighten out.

Sure, walking users through all that is a pain. And it shouldn't really be necessary.

But it's the price our IT shops will have to pay if we want to get the benefits of this ISP antispam revolt. **by 45380**



From Bad to Worse

When this 24/7 server loses a disk drive, an alarm starts bleeping to warn administrators to replace the drive in the RAID array. How did it get installed in 24 hours, says pilot fish, but meanwhile the boss complains about the noise. "Can it be stopped?" he asks. Not without a reboot, fish says. "No way can we afford the downtime," boss says. "But could you get a pair of wire cutters and take care of the bleeping?"

Physicians, Heal Thyself!

A virus is wreaking havoc at the main office of the hospital group, so IT manager personally

prepares antibiotic disks for 10 minutes. Just one problem: "All 10 disks had a virus on them, because he had the virus on his own PC," says head pilot fish. "None of those field units were infected until they got the disk."

What a Surprise

Network controller goes down, and as does the head's laptop. After network, so-called fish gets called in to troubleshoot. The boss mutters the word "no" and the


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gets it stuck in the happy debt."

Recent Service

After pilot fish samples up \$10,000 for broadband service at this Wilson Valley hotel, his PC's firewall announces that it's blocking probes of an always-on. "I need the Wilson Internet, Neighborhood and not just I could use the computer — by name — of other hotel guests," fish says. "I can't shut I had a firewall and was blocking internet."

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